

# A revision of the spider genera *Asemonea* and *Pandisus* (Araneae : Salticidae)

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## Synopsis

The spider genera *Pandisus* Simon and *Asemonea* O. P.-Cambridge are revised and one new genus *Goleba* is proposed. All 21 known species of these genera (of which 11 are new) are described and figured. Distributional data are given and a key to the species of *Pandisus* and *Asemonea* is provided. Generic relationships within the subfamily Lyssomaninae are discussed and generic groups based on the structure of the male genitalia are proposed. The type material of 11 nominate species was examined and five lectotypes are newly designated. Four specific names are newly synonymized and three new combinations are proposed.

## Introduction

The present paper completes a series of generic revisions on old world Salticidae classified in the subfamily Lyssomaninae. Two genera, *Asemonea* O. P.-Cambridge and *Pandisus* Simon are revised and one new genus *Goleba* gen. n. is proposed.

The systematic position of lyssomanine spiders has been confused since Blackwall (1877) first proposed the formation of a separate family, the Lyssomanidae. In the same paper O. P.-Cambridge stated that although the genus *Lyssomanes* Hentz (type species *Lyssomanes viridis* (Walckenaer), Fig. 26A, B) is an exceedingly distinct and remarkable one there

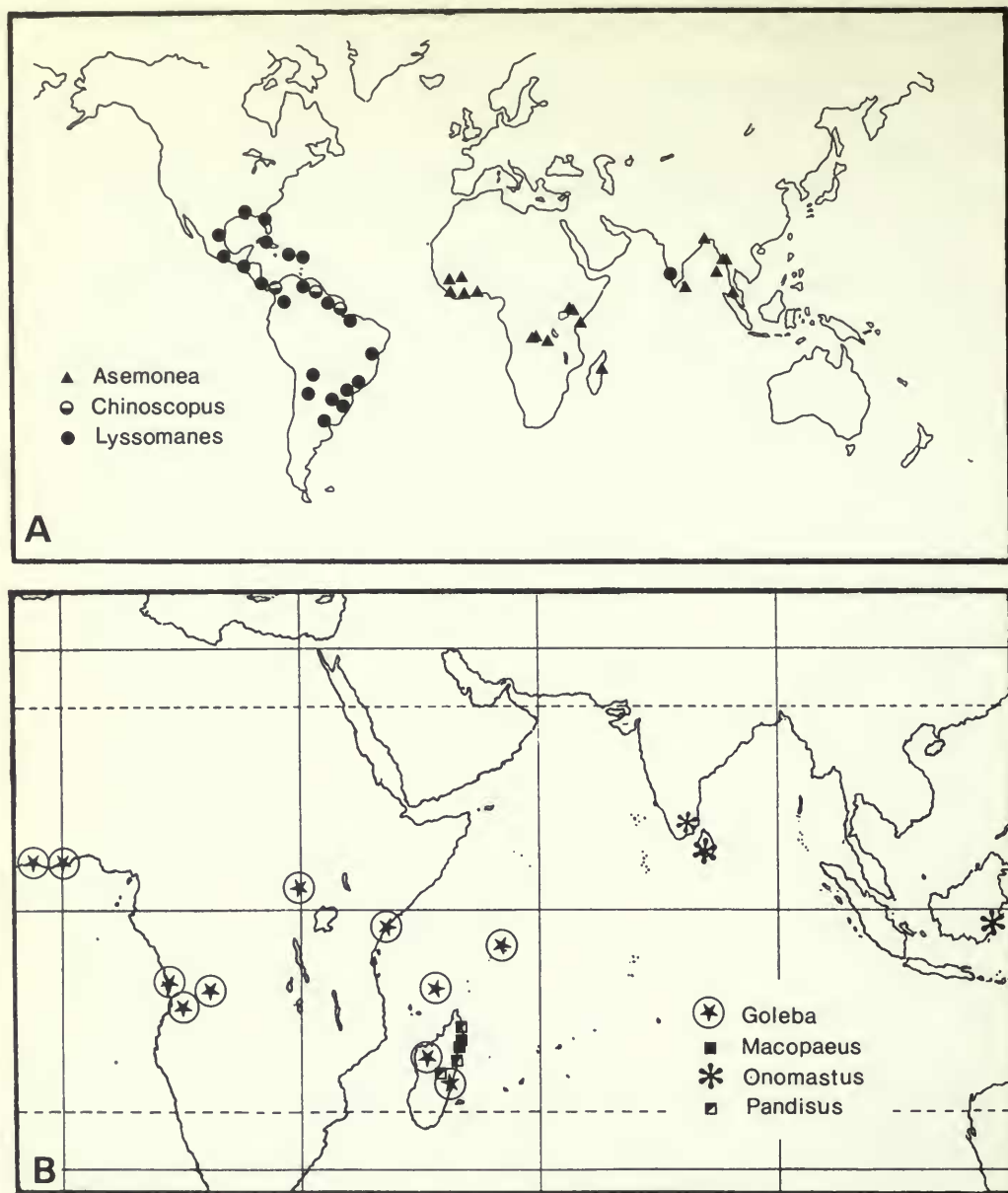


Fig. 1 A, distribution of *Asemonea*, *Chinoscopus* and *Lyssomanes*. B, distribution of *Goleba*, *Macopaeus*, *Onomastus* and *Pandisus*.

appears to be nothing to warrant its separation from salticids to which it is unmistakeably allied. The subsequent history of the lyssomanine has been reviewed by Galiano (1976), who redefined the group and concluded on morphological grounds that they merit no more than subfamilial rank within the Salticidae. Wanless (1978b) suggested that the lyssomanine were possibly related to several salticine genera (*Portia* Karsch, *Brettus* Thorell and *Cocalus* C. L. Koch) and that *Brettus* may have represented a possible link. However, this hypothesis could not be upheld when *Brettus* was revised (Wanless 1979). Subsequent studies (Wanless 1980a, b, c) have clarified, but not necessarily settled, the systematic position of several old world lyssomanine genera. *Onomastus* Simon, from Borneo, India and Sri Lanka is

evidently not closely related to other lyssomanine genera. *Macopaeus* Simon, from Madagascar shows affinities with *Asemonea* and *Pandisus*. *Orthrus* Simon known only from three oriental species, belongs elsewhere on account of the structure of the secondary genitalia. *Lyssorthrus* Roewer, represented by a single species from New Guinea, seems to belong near the subfamily Boethinae and will be dealt with when those genera are revised. The Lyssomaninae (sensu Petrunkevitch, 1928) is therefore comprised of seven genera which, with the exception of *Lyssomanes*, have either a new or old world distribution (Fig. 1A, B):

**Table 1** List of genera in the subfamily Lyssomaninae (sensu Petrunkevitch, 1928)

New world	Old world
<i>Chinoscopus</i> (5 species)	<i>Asemonea</i> (13 species)
<i>Lyssomanes</i> (54 species)	<i>Goleba</i> (3 species)
	<i>Lyssomanes</i> (1 species)
	<i>Macopaeus</i> (1 species)
	<i>Onomastus</i> (4 species)
	<i>Pandisus</i> (4 species)

According to Petrunkevitch, Caporiacco and other authors (Galiano 1976) there are two main diagnostic characters which distinguish lyssomanines from ordinary salticids: eyes in four rows and a tracheal system confined to the abdomen. As Galiano (1976) has already pointed out, recent findings (Esteban 1976) show that at least in some species of *Lyssomanes* there are tracheal tubes in the carapace. Wanless (1978*b*) argued that the degree of complexity of the tracheal system (i.e. simply or highly branched) was possibly of more evolutionary significance. However, recent studies (Wanless, in press *e*) on the trachea of *Hispo* Simon, a genus of ordinary salticids, has revealed a simple system resembling that found in *Asemonea tenuipes* O. P.—Cambridge. With regard to the eye arrangement, the statement 'eyes in four rows' is too imprecise and does not effectively define their pattern. It has already been shown (Prószyński 1968, Galiano 1976 and Wanless 1978*b*) that several genera of ordinary salticids (e.g. *Athamas* O. P.—Cambridge, *Synemosyna* Hentz, *Viciria* Thorell and *Mantisatta* Warburton) have the eyes arranged in four transverse rows. In spite of these difficulties and with reservations in respect of certain genera, Galiano (1976) redefined the subfamily on the basis of somatic characters. A reassessment of these characters and a comparative study of the secondary genitalia, especially the male palps, suggests that the subfamily is polyphyletic and comprised of Salticidae which have in most cases adapted to an arboreal existence associated with green leaves. For the present, I propose to divide the subfamily into three groups which can be defined on the basis of derived characters.

Group I. Comprised of one oriental genus, *Onomastus* Simon, which has recently been revised by the author (Wanless, 1980*c*). The synapomorphy linking all *Onomastus* species is the presence of a distinctive tegular apophysis not known to occur in other salticids. The placement of *Onomastus* remains uncertain as the palps are unusually complex and out-group comparison with *Oxyopes* (Family Oxyopidae, the supposed sister group of the Salticidae) suggests that they may have retained several characters (i.e. conductor and median apophysis) which have been secondarily reduced in many Salticidae (see Wanless 1980).

Group II. Includes two genera, *Lyssomanes* Hentz and *Chinoscopus* Simon. Both are distributed in the new world except for one species, *Lyssomanes karnatakaensis* Tikader & Biswas, from India (Fig. 1A). The species resemble one another in general habitus, but those of *Chinoscopus* are usually flatter and more elongate, also males lack the elongate chelicerae characteristic of *Lyssomanes*. The eye patterns are similar (Fig. 2A, B) and are presumed to

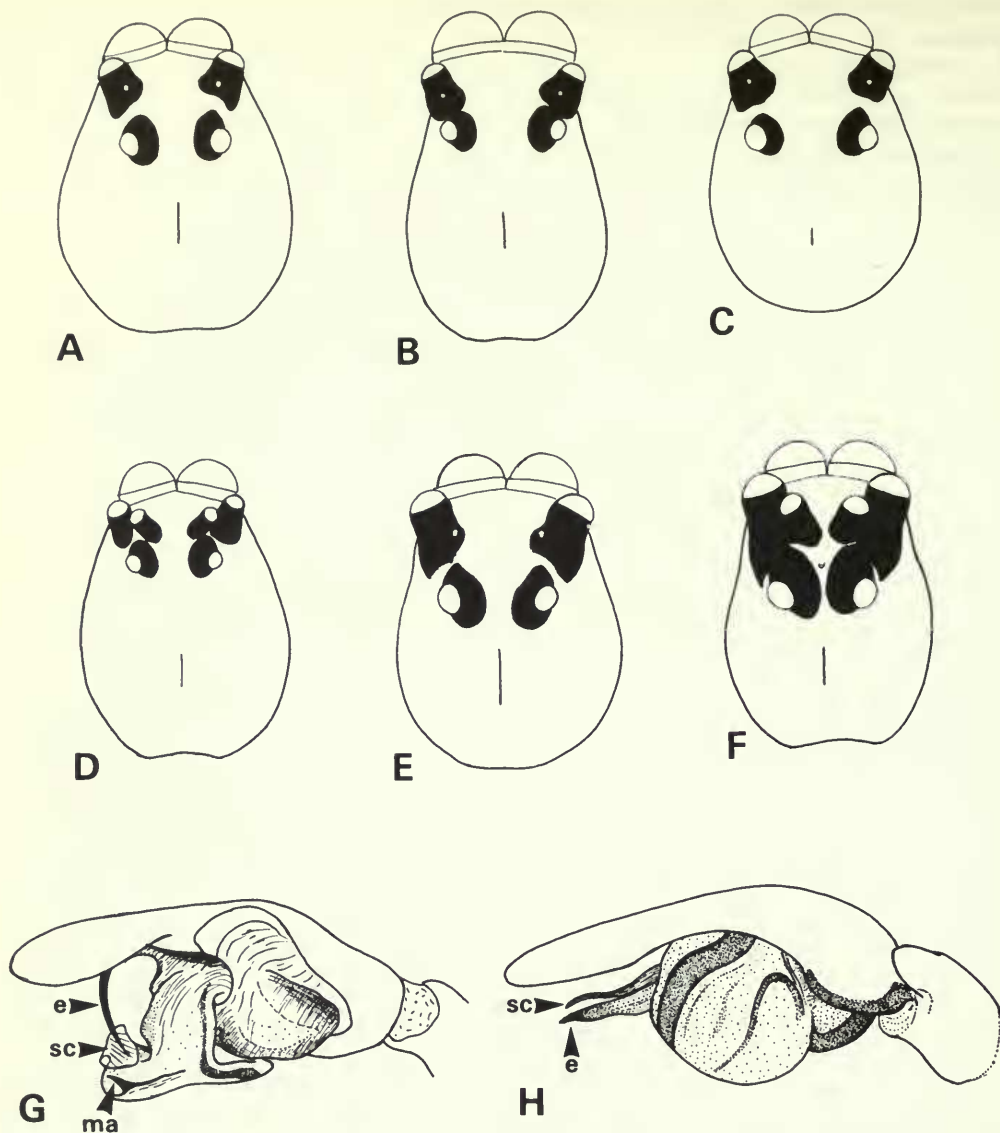


Fig. 2 (A-F) carapaces in dorsal view: A, *Lyssomanes viridus* (Walckenaer), ♂; B, *Chinoscopus flavus* Peckham, Peckham & Wheeler, ♂; C, *Onomastus patellaris* Simon, ♂; D, *Asemonea tenuipes* O. P.-Cambridge, ♂; E, *Pandisus sarae* sp. n., ♂; F, *Macopaeus spinosus* Simon, ♀. (G-H) ♂ palps ectal view: G, *Lyssomanes pencillatus* Mello-Leitão (after Galiano 1962); H, *Chinoscopus flavus*.

be derived in respect of other salticids. The male palps (Fig. 2G, H) are not unduly complex, but certain characters (i.e. membraneous secondary conductor (sc) and median apophysis (ma)) seldom occur in Salticidae. The occurrence of a membraneous conductor, fan-shaped in *Lyssomanes* and rod-like in *Chinoscopus*, may be synapomorphic for these genera, but at present I am uncertain as to the uniqueness of this type of conductor within the Salticidae. Furthermore, I am not sure if the median apophysis of *Lyssomanes* (evidently lacking in *Chinoscopus*, possibly as a result of secondary reduction) is homologous with that of *Onomastus*. My knowledge of *Lyssomanes* and *Chinoscopus* is too fragmentary for me to reach any firm conclusions on relationships concerning this group.



Group III. Known only from the old world and comprised of four genera, *Asemonea* O. P.—Cambridge, *Goleba* gen. n., *Macopaeus* Simon and *Pandisus* Simon. The synapomorphy linking these genera is the migration of the posterior median eyes to a position closer to and clearly inside the optical axis of the anterior lateral eyes (Fig. 2D, E, F), the resulting pattern being different from that of all other known Salticidae.

The affinities of *Macopaeus* within this group are uncertain as the genus is only known from a single female specimen (Wanless, 1980a). Of the remaining genera, *Asemonea* and *Pandisus* are united by the presence of a ventral furrow and distal apophysis on the femora of the male palp (Figs 4E, 10E). They are presumed to be derived as such structures are not known to occur in any other Salticidae. The fourth genus, *Goleba* has been proposed for a group of species formerly included in *Asemonea* on account of close similarities in somatic characters, especially the eye dispositions. The male palps are however, clearly quite different (Figs 22D, E; 24B, E). The presence of a ventral tubercle on the palpal femora could be regarded as either germinal or vestigial in respect of the furrow and apical apophysis of *Asemonea* and *Pandisus*, but as the palpal tibial apophysis and sclerites are also distinctive it seems more likely that the ventral tubercle has been independently derived. If this is correct then *Goleba* probably evolved before the separation of *Asemonea* and *Pandisus*. The minute posterior median eyes of *Pandisus* may seem inconsistent with this hypothesis as these eyes are large in *Asemonea* and *Goleba*. However, their slightly elliptical outline suggests they may have been secondarily reduced.

The affinities between the *Asemonea* and *Lyssomanes* groups are uncertain. Similarities in respect of brooding behaviour and moulting (Eberhard 1974, Wanless 1978b, see also under *A. murphyi* sp. n., p. 23) suggests that they could be fairly closely related, but morphological characters, especially palpal structures, and distribution patterns indicate otherwise. They may even merit subfamily status. For the moment, I am reluctant to propose formal changes in classification as the relationships will possibly be more clearly understood when the subfamily Boethinae has been revised.

The measurements were made in the manner described by Wanless (1978a), but for the leg spination the system adopted is that used by Platnick and Shadab (1975).

### Genus *PANDISUS* Simon

*Lyssomanes*: Peckham, Peckham & Wheeler, 1888 : 231 [in part].

*Lyssomanes* (*Maroussa*) Peckham, Peckham & Wheeler, 1888 : 225 [in part].

*Pandisus* Simon, 1900 : 27. Type species *Pandisus scalaris* Simon by original designation and monotypy. Simon, 1901 : 394, 397, 398. Petrunkevitch, 1928 : 181. Roewer, 1954 : 933; 1965 : 5. Bonnet, 1958 : 3322. Galiano, 1976 : 60.

**DEFINITION.** Small to medium spiders ranging from about 3.0 to 5.5 mm in length. Sexes alike in general habitus, sexual dimorphism sometimes evident in colour markings; not hirsute, leg fringes lacking. *Carapace*: longer than broad, moderately high with elevated eye region, widest at posterior margin of coxae II; fovea long and sulciform, positioned more or less midway between posterior lateral eyes and posterior thoracic margin; sculpturing not marked, cuticle sometimes weakly iridescent green. *Eyes*: with black surrounds except anterior medians; set on well developed tubercles; arranged in four transverse rows comprised of anterior medians, anterior laterals, posterior medians and posterior laterals; anterior medians largest, almost occupying full breadth of facies; anterior laterals more than half diameter of anterior medians, positioned behind and plainly wider than first row; posterior medians minute, sometimes slightly elliptical in outline, closer to and clearly situated inside optical axis of anterior laterals; posterior laterals as large or almost as large as anterior laterals, set closer together and well inside lateral margins of carapace; quadrangle formed by posterior median and posterior lateral eyes broader than long and widest posteriorly; entire quadrangle (measured from base of anterior median to posterior margin of

posterior laterals) occupying between 46 and 52% of carapace length. *Clypeus*: between 38 and 52% of diameter of anterior median eyes; slightly concave with three or four curved setae in lower space between anterior median eyes. *Chelicerae*: of medium size, moderately robust, more or less vertical; promargin with three teeth, retromargin with seven to ten. *Maxillae*: moderately long, relatively broad, subparallel. *Labium*: subtriangular, about as long as wide and about half maxillae length. *Sternum*: broadly scutiform to cordiform. *Coxae*: subequal in size. *Abdomen*: elongate ovoid, colour markings generally inconspicuous, sometimes clothed in minute iridescent setae; anterior spinnerets robust, posteriors and medians slender, length subequal in males, posteriors slightly more elongate in females; position of colulus indicated by transverse row of 10 to 15 setae with a patch of setae anteriorly; anal tubercle a moderately well developed cone; tracheal system not examined. *Legs*: long and slender; spines numerous, long and robust; claws pectinate, tufts present, scopulae absent. *Female palps*: long and slender with apical claw. *Male palps*: complex, generally similar in form. Femora with ventral furrow fringed in setae, opening into apical apophysis; patellae usually with retrolateral apophysis; tibiae with retrolateral and dorsal apophyses; cymbium moderately long, sometimes with distal finger-like extension, clothed in long fine hairs (not always included in the figures); embolus (e) moderately long slender and curved, arising from basal margin of tegulum (t), detached from embolic guide (eg) but resting distally in a median tegular groove; pars pendula (p) sometimes present; tegulum somewhat bulbous, retrolateral margin sclerotized and grooved forming the embolic guide; subtegulum bulbous with sinuous ducts and scale-like apophysis (m). *Epigyne*: openings slit-like or broad with protruding median septum; introductory ducts diverge laterally from openings, looping and forming distal spirals; spermathecae ovoid with lanceolate fertilization ducts. Precise conformation of introductory ducts and their association with the spermathecae is uncertain.

**REMARKS.** The modified palpal femora probably secrete a fluid as there is evidently a duct in the apical apophysis (more apparent in *Asemonea*). It is not known if these modifications are in any way homologous with the ducted, male palpal tibial apophyses found in *Brettus* Thorell (Wanless 1979).

**DIAGNOSIS.** *Pandisus* is easily distinguished from *Asemonea*, *Goleba* and *Macopaeus* by the minute posterior median eyes and secondary genitalia.

### List of species in the genus *Pandisus* Simon, 1900

- Pandisus decorus* sp. n.  
*P. modestus* (Peckham, Peckham & Wheeler, 1888)  
*P. parvulus* sp. n.  
*P. sarae* sp. n.  
*P. scalaris* Simon, 1900

### Key to species of *Pandisus*

#### Males (males of *modestus* are unknown)

- |   |  |                                 |
|---|--|---------------------------------|
| 1 | Palpal patella with retrolateral apophysis (Figs 3, 4D, 5C) . . . . .  | 2                               |
| – | Palpal patella without retrolateral apophysis (Fig. 7C) . . . . .      | <i>parvulus</i> sp. n. (p. 225) |
| 2 | Retrolateral apophysis of palpal patella slender (Fig. 3) . . . . .    | <i>scalaris</i> Simon (p. 219)  |
| – | Retrolateral apophysis of palpal patella broad (Figs 4D; 5C) . . . . . | 3                               |
| 3 | Pars pendula (p) present (Fig. 4D, G) . . . . .                        | <i>sarae</i> sp. n. (p. 219)    |
| – | Pars pendula absent (Fig. 5C, F) . . . . .                             | <i>decorus</i> sp. n. (p. 221)  |

#### Females (females of *parvulus* and *scalaris* are unknown)

- |   |   |                                |   |
|---|---|--------------------------------|---|
| 1 | Epigynal opening keyhole-shaped (Fig. 6C) . . . . .   | <i>Modestus</i> Simon (p. 222) | 2 |
| – | Epigynal opening otherwise . . . . .  |                                |   |
| 2 | Arch of epigynal opening relatively broad with darker markings extending laterally (Fig. 4C) . . . . .                | <i>sarae</i> sp. n. (p. 219)   |   |
| – | Arch of epigynal opening relatively narrow with indistinct lateral markings extending posteriorly (Fig. 5E) . . . . . | <i>decorus</i> sp. n. (p. 221) |   |

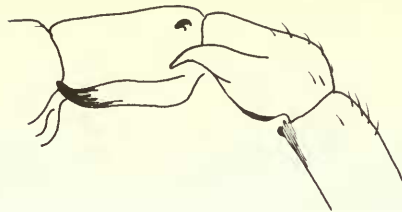


Fig. 3 *Pandisus scalaris* Simon, ♂ palp ectal view (after Simon 1901)

***Pandisus scalaris* Simon**

(Fig. 3)

*Pandisus scalaris* Simon, 1900 : 27, ♂. [not examined, presumed lost]. Simon, 1901 : 391, 394, 396, 399. Petrunkevitch, 1928 : 181. Roewer, 1954 : 933; 1965 : 6.

REMARKS. Roewer (1965) examined, but did not describe the type specimen of this species which has subsequently been lost. Fortunately Simon (1900, 1901) provides a description and figure from which the species can be identified with some certainty.

DIAGNOSIS. *P. scalaris*, described only from the male, is distinguished from other known males of *Pandisus* by the long curved apophysis on the palpal patella (Fig. 3).

FEMALE. Unknown.

MALE (after Simon, 1900). Length 5.0 mm. Cephalothorax obscurely tawny, darkly margined, with ocular region on both sides broadly margined with black, clothed with brightly shining whitish green hairs. Clypeus at least twice as narrow as the anterior eyes and with shining hairs. Abdomen slender, yellow, above with a broad band including a pair of brick coloured spots, below on both sides marked with a long dark spot; above with shining white hairs, laterally, at least posteriorly with bright scarlet hairs. Chelicerae, mouth parts, sternum and coxae yellow. Legs obscurely tawny, with the anterior femora below broadly darkened and banded, armed with many long black spines. Palps tawny, with femora below and apically black and minutely pointed, with a short nodular patella armed below towards the lower margin with a black blade-like apophysis swollen basally, distally acute and hooked; tibiae a little longer than the patella, externally at the base almost dorsally with a small obtuse apophysis, on the lower margin with a larger black blade-like apophysis anteriorly subacute.

DISTRIBUTION. Madagascar, Tamatave.

REMARKS. This may be conspecific with *P. modestus*.

***Pandisus sarae* sp. n.**

(Fig. 4A–J)

DIAGNOSIS. *P. sarae* is most closely related to *P. decorus*, but may be separated by the presence of a pars pendula (p) in males (Fig. 4D, G). Females are distinguished sometimes with difficulty by the broader epigynal arch (Fig. 4C) and apparent absence of posteriorly directed lateral markings.

MALE HOLOTYPE. *Carapace* (Fig. 4A–B): pale amber with darker margins and faint streaks radiating from foveal region; weakly iridescent. *Eyes*: with black surrounds except AM; AM sparsely fringed in pale yellowish hairs. *Clypeus*: tinged black with scattered iridescent setae (? rubbed). *Chelicerae*: light orange-brown, shiny with scattered long fine pale orange hairs; promargin with 3 teeth, retromargin with 8 or 9. *Maxillae and labium*: pale yellow tinged black. *Sternum* (Fig. 4I): pale yellow, thinly clothed in fine pale amber hairs. *Coxae*: pale



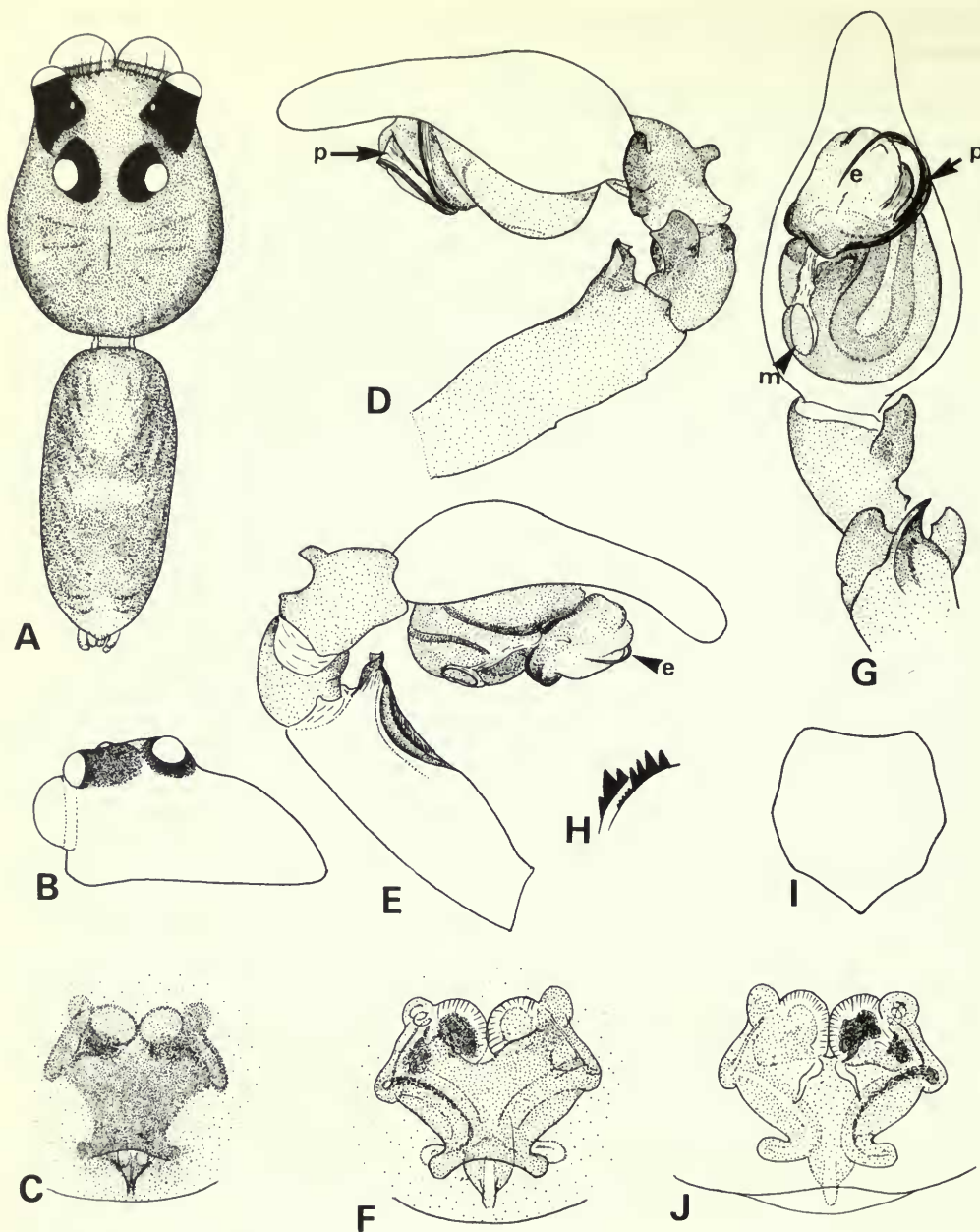


Fig. 4 *Pandisus sarae* sp. n., holotype ♂: A, dorsal view; B, carapace lateral view; D, palp, ectal view (=retrolateral view); E, palp, ental view (=prolateral view); G, palp, ventral view; H, cheliceral teeth; I, sternum. Paratype ♀: C, epigyne; F, vulva, ventral view; J, vulva, dorsal view.

yellow-brown. *Abdomen*: whitish yellow to greyish yellow with black markings; sparsely covered in fine pale amber hairs and minute iridescent setae; underside pale yellow with blackish lateral markings; spinnerets pale yellow lightly tinged black. *Legs*: yellow-brown grading to orange-brown distally with sides lightly tinged black. Leg I spines: metatarsi V 4-0-0, P 1-1-1, D 0-1-0, R 1-1-1, tibiae V 4-2-0, P 1-0-1, D 1-1-0, R 1-1-1; patellae R 0-1-0; femora P 0-1-1, D 1-1-1, R 0-1-1. *Palp* (Fig. 4D, E, G): pars pendula well developed.



*Dimensions* (mm): total length 4.96; carapace length 2.4, breadth 1.96, height 1.28; abdomen length 2.5; eyes, width of AM row 1.18, AL row 1.52, PM row 0.79, PL row 1.0; quadrangle length 1.08. *Ratios*: AM : AL : PM : PL : 14.5 : 8.5 : 2 : 8; AM : CL (clypeus) : 14.5 : 6.

FEMALE PARATYPE. Similar to ♂, but paler with less distinctive markings. General colouration whitish yellow to pale yellow with minute iridescent setae in eye region and blackish prolateral stripes on femora, patellae and tibiae of legs I and II. Spination of legs I: metatarsi V 4-0-0, P 1-1-1, D 0-1-0, R 1-1-1; tibiae V 4-2-0, P 2-1-0, D 1-1-0, R 1-1-1; patellae P 0-1-0, R 0-1-0; femora P 0-0-1, D 1-1-1, R 0-1-1. *Epigyne* (Fig. 4C, F, J): clothed in long whitish hairs. Lateral markings indistinct.

*Dimensions* (mm): total length 5.52; carapace length 2.44, breadth 2.0, height 1.36; abdomen length 2.92; eyes, AM row 1.32, AL row 1.6, PM row 0.8, PL row 1.16; quadrangle length 1.24. *Ratios*: AM : AL : PM : PL : 15.5 : 8.5 : 2 : 8.5; AM : CL : 15.5 : 8.

VARIATION. ♂ total length 4.88 to 5.12 mm, carapace length 2.4-2.56 mm (4 specimens); ♀ total length 5.3-5.52 mm, carapace length 2.32-2.44 mm (2 specimens). Males from Mt. Ambohisanga have iridescent setae (shining white under some angles of illumination) in eye region; the markings are less distinctive. In females the epigynes are sometimes plugged and as such cannot be readily separated from *P. decorus* sp. n.

DISTRIBUTION. Madagascar.

MATERIAL EXAMINED. **Madagascar**: Beanana, holotype ♂, ii.1970 (*A. Lambillon*, MT. 142.599); paratypes 2 ♀♀, same data as holotype; Mt. Ambohisanga, paratypes 3 ♂♂, 1 ♀, i.1951 (*A. Pierrard*, MT. 142.914) (MRAC, Tervuren).

ETYMOLOGY. Named after my eldest daughter Sara Wanless.

### *Pandisus decorus* sp. n.

(Fig. 5A-G)

DIAGNOSIS. *P. decorus* is most closely related to *P. sarae*. Males are readily distinguished by the apparent absence of the pars pendula, also by the shape of the retrolateral apophysis on the patella (Fig. 5C, F). Females are separated with difficulty by the narrower epigynal arch and lateral markings which extend posteriorly (Fig. 5E).

MALE HOLOTYPE. *Carapace* (Fig. 5A, B): yellow-brown with wide brown marginal bands; weakly iridescent with scattered iridescent setae in eye region. *Eyes*: with black surrounds except AM, anteriors sparsely fringed in dull yellowish hairs. *Clypeus*: yellow-brown tinged black, sparsely covered in fine iridescent hairs. *Chelicerae*: pale yellow, shiny; promargin with 3 teeth, retromargin with 7 or 8. *Maxillae and labium*: whitish yellow with sooty markings. *Sternum* (Fig. 5G): yellow-white, shiny. *Coxae*: pale yellowish. *Abdomen*: above pale yellow with grey-black markings, thinly clothed in fine iridescent hairs; underside whitish yellow with blackish sides; spinnerets pale yellow lightly tinged black. *Legs*: yellow-brown grading to orange-brown distally with lateral surfaces lightly tinged black. Leg I spines: metatarsi V 4-0-0, P 1-1-1, D 0-1-0, R 1-1-1; tibiae V 2-4-0, P 1-1-1, D 1-0-1, R 1-1-1; patellae P 0-1-0, R 0-1-0; femora P 0-0-1, D 1-1-1, R 0-1-1. *Palp* (Fig. 5C, D, F): pars pendula lacking.

*Dimensions* (mm): total length about 4.8; carapace length 2.24, breadth 1.82, height 1.31; abdomen length 2.44; eyes, width of AM row 1.28, AL row 1.64, PM row 0.82, PL row 1.12; quadrangle length 1.16. *Ratios*: AM : AL : PM : PL : 16 : 9.5 : 2.2 : 8.5; AM : CL : 16 : 6.

FEMALE PARATYPE. Similar to ♂, but more or less pale yellow in colour with scattered fine pale amber hairs (rubbed in ♂) and minute iridescent setae on abdomen. Leg I spines as in ♂

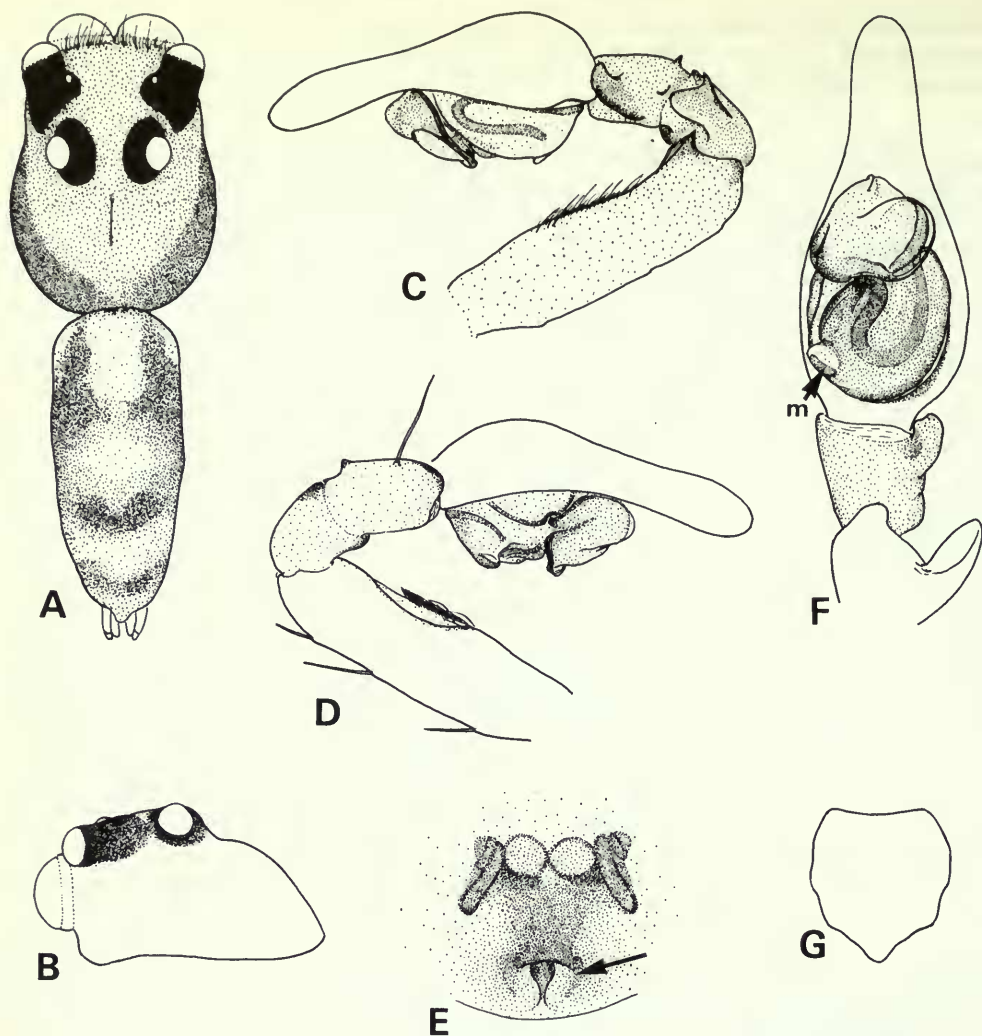


Fig. 5 *Pandisus decorus* sp. n., holotype ♂: A, dorsal view; B, carapace, lateral view; C, palp, ectal view; D, palp, ental view; F, palp, ventral view; G, sternum. Paratype ♀: E, epigyne.

except for the following: tibia V 4-2-0, P 1-0-1. *Epigyne* (Fig. 5E) similar to that of *P. sarae*.

*Dimensions* (mm): total length 5.3; carapace length 2.44, breadth 2.0, height 1.36; abdomen length 2.8; eyes, AM row 1.22, AL row 1.55, PM row 0.76, PL row 1.12; quadrangle length 1.16. *Ratios*: AM : AL : PM : PL : 15 : 9 : 2 : 8; AM : CL : 15 : 6.

**DISTRIBUTION.** Madagascar.

**MATERIAL EXAMINED.** **Madagascar:** Est. Antsirabe, holotype ♂, paratype ♀, x.-xi.1970 (*J. Gossuin*, MT. 142.578) (MRAC, Tervuren).

***Pandisus modestus* (Peckham, Peckham & Wheeler)**

(Fig. 6A-D)

*Lyssomanes* (*Maroussa*) *modestus*, Peckham, Peckham & Wheeler, 1888 : 231, ♀. **LECTOTYPE** ♀ and 8 ♀♀ **PARALECTOTYPES** (here designated) Madagascar (MCZ, Harvard) [examined].

*Pandisus modestus*: Simon, 1901 : 396. Roewer, 1954 : 933, 1965 : 6. Bonnet 1958 : 3322.

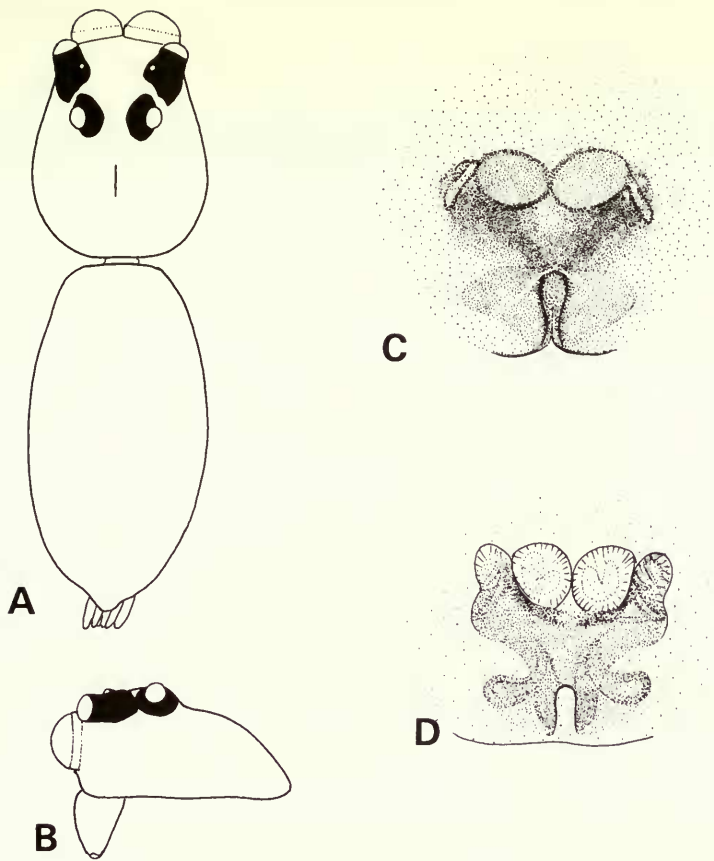


Fig. 6 *Pandisus modestus* Peckham, Peckham & Wheeler, lectotype ♀: A, dorsal view; B, carapace, lateral view; C, epigyne; D, vulva, ventral view.

REMARKS. This species was originally placed in the subgenus *Maroussa* Peckham, Peckham & Wheeler, 1888 which was subsequently synonymized with *Lyssomanes* (Bonnet, 1957).

DIAGNOSIS. *P. modestus* is distinguished from other species of *Pandisus* by the shape of the epigynal opening (Fig. 6C).

MALE. Unknown.

FEMALE LECTOTYPE. *Carapace* (Fig. 6A, B): yellow-brown, paler in eye region; weakly iridescent with scattered iridescent and dull whitish hairs in eye area. *Eyes*: with black surrounds except AM; AM sparsely fringed in light yellowish hairs. *Clypeus*: thinly clothed in fine whitish hairs. *Chelicerae*: pale yellow-brown, shiny; promargin with 3 teeth retromargin with 8. *Maxillae and labium*: whitish yellow with yellow-brown markings. *Sternum*: whitish yellow. *Coxae*: yellow-brown. *Abdomen*: yellow-brown with scattered pale amber hairs. *Legs*: yellow-brown with brownish sides on metatarsi and tibiae of legs I–II. Leg I spines: metatarsi V 4–0–0, P 1–1–1, D 0–1–0, R 1–1–1; tibiae V 2–4–0, P 2–0–1, D 1–0–1, R 1–1–1; patellae P 0–1–0, R 0–1–0; femora P 0–0–1, D 1–1–1, R 0–1–1. *Epigyne* (Fig. 6C, D).

*Dimensions* (mm): total length 5.0; carapace length 2.0, breadth 1.7, height 1.08; abdomen length 3.0; eyes, AM row 1.04, AL row 1.32, PM row 0.72, PL row 0.96; quadrangle length 0.92. *Ratios*: AM : AL : PM : PL : 12 : 7 : 2 : 6; AM : CL : 12 : 5.

VARIATION. ♀ total length 4.64 to 5.44 mm, carapace length 1.9–2.28 mm (9 specimens). As

in other members of this genus the epigyne is sometimes plugged. However, the opening is nevertheless still fairly distinctive.

DISTRIBUTION. Madagascar.

MATERIAL EXAMINED. Lectotype and paralectotype ♀♀, data as in synonymy.

REMARKS. This may be conspecific with *P. scalaris*, known only from the male.

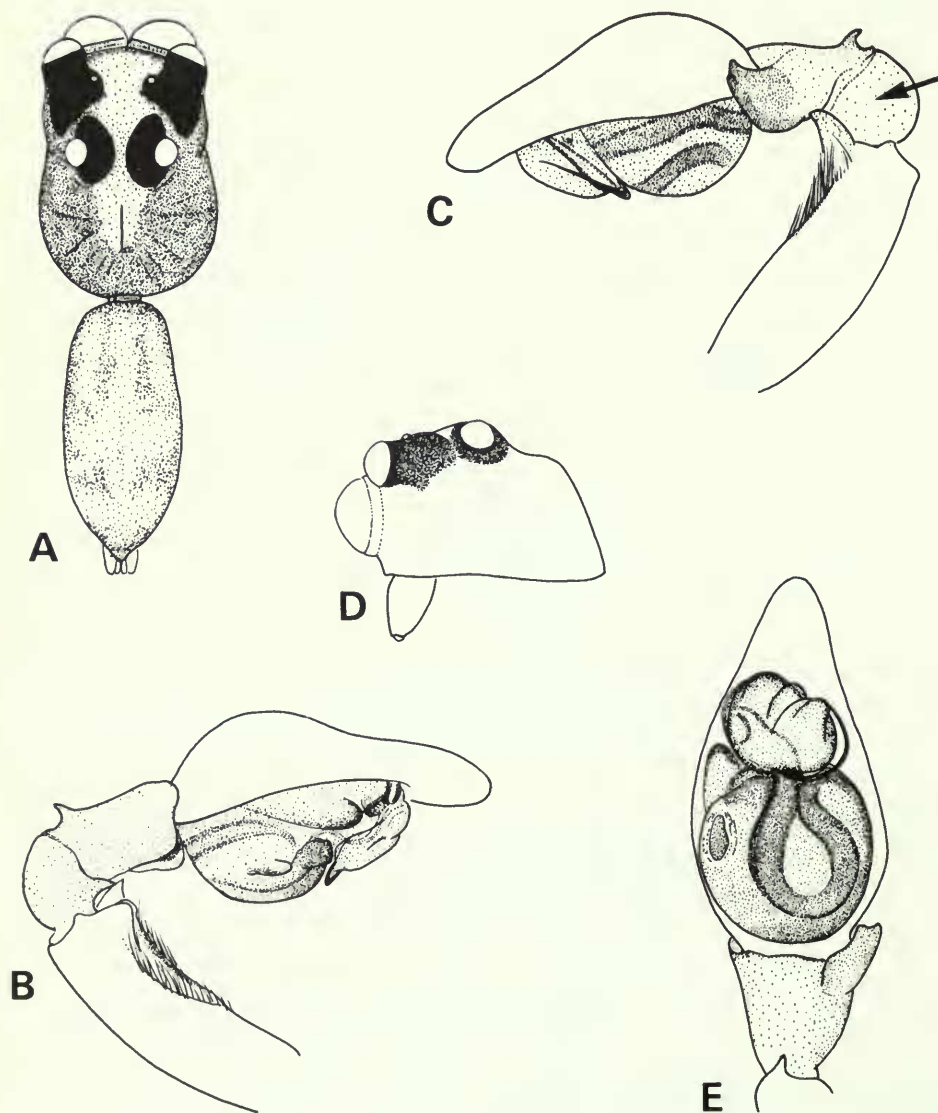


Fig. 7 *Pandisus parvulus* sp. n., holotype ♂: A, dorsal view; B, palp, ental view; C, palp, ectal view; D, carapace lateral view; E, palp, ventral view.



*Pandisus parvulus* sp. n.

(Fig. 7A–E)

**DIAGNOSIS.** *P. parvulus* is a small distinctive species readily separated from other species of *Pandisus* by the absence of a retrolateral apophysis on the palpal patellae (Fig. 7C).

**FEMALE.** Unknown.

**MALE HOLOTYPE.** *Carapace* (Fig. 7A, D): dark brown with eye and foveal regions whitish yellow and sooty markings radiating from fovea; glossy under some angles of illumination. *Eyes*: with black surrounds except AM. *Clypeus*: pale brown tinged black. *Chelicerae*: pale yellow with blackish markings; promargin with 3 teeth, retromargin with 7 or 8. *Maxillae and labium*: whitish yellow tinged black. *Sternum*: pale yellow, shiny. *Abdomen*: pale yellow with indistinct sooty markings; spinnerets pale yellow. *Legs*: pale yellow. Leg I spines: metatarsi V 2–0–0, P 1–2–1, R 1–2–1; tibiae V 2–4–0, P 2–0–1, D 0–0–1, R 1–0–1; femora P 0–0–1, D 1–1–2. *Palp* (Fig. 7B, C, E).

*Dimensions* (mm): total length 2.92; carapace length 1.44, breadth 1.07, height 0.92; abdomen length 1.44; eyes, AM row 0.83, AL row 0.98, PM row 0.4, PL row 0.68; quadrangle length 0.72. *Ratios*: AM : AL : PM : PL : 10.5 : 6.5 : 1 : 5; AM : CL : 10 : 4.

**DISTRIBUTION.** Madagascar.

**MATERIAL EXAMINED.** **Madagascar:** Beparasy, holotype ♂, ii.1968 (*A. Lambillon*, MT. 142.739) (MRAC, Tervuren).

Genus *Asemonea* O. P.-Cambridge

*Asemonea* O. P.-Cambridge, 1869 : 65. Type species *Lyssomanes tenuipes* O. P.-Cambridge, by monotypy. Simon, 1901 : 382, 390, 391, 395, 397, 399. Petrunkevitch, 1928 : 181. Sherriffs, 1931 : 537. Gerhardt & Kästner, 1938 : 636. Bonnet, 1955 : 763. Galiano, 1976 : 59–67. Wanless, 1979 : 184.

*Asemonia*: Waterhouse, 1902 : 34. Wanless, 1978b : 85, 86 [spelling mistake].

*Asamonea*: Simon, 1885 : 26. Peckham, Peckham & Wheeler, 1888 : 225, 241 [spelling mistake]. Roewer, 1954 : 927 [= *Asemonea* auct. alt.]; 1965 : 3.

*Asamonia*: Waterhouse, 1902 : 34 [spelling mistake].

**DEFINITION.** Small to medium spiders ranging from about 2.6 to 7.0 mm in length. Sexes alike in general habitus, sexual dimorphism sometimes evident in colour markings and presence of ornate fringes in males; distinctive colour patterns sometimes present. *Carapace*: longer than broad, low to moderately high with elevated eye region, widest at posterior margin of coxae II; fovea long, moderately sulciform, positioned more or less midway between posterior lateral eyes and posterior thoracic margin; sculpturing not marked, cuticle sometimes weakly iridescent green. *Eyes*: usually with black surrounds except anterior medians; set on moderately well developed tubercles; arranged in four transverse rows (rows two and three close) comprised of anterior medians, anterior laterals, posterior medians and posterior laterals; anterior medians largest, almost occupying full breadth of facies; anterior laterals about half or more than half diameter of anterior medians, positioned behind and plainly wider than first row; posterior medians relatively large, closer to and clearly situated inside optical axis of anterior laterals; posterior laterals almost as large as anterior laterals, set closer together and well inside lateral margins of carapace; quadrangle formed by posterior median and posterior lateral eyes broader than long and widest posteriorly; entire quadrangle (measured from base of anterior median eyes to posterior margin of posterior lateral eyes) occupying between 30 and 40% of carapace length. *Clypeus*: between 32 and 60% of diameter of anterior median eyes, sometimes clothed in fine shining hairs layered perpendicularly with three curved setae in lower space between anterior median eyes. *Chelicerae*: small to medium in size, moderately robust, vertical or inclined posteriorly; promargin with three, rarely two teeth, retromargin with five to seven, rarely three. *Maxillae*: of medium length,

outer margins not deeply excavated; parallel or convergent. *Labium*: subtriangular, usually wider than long, about half or less than half maxillae length. *Sternum*: cordiform, margins usually indistinct. *Coxae*: subequal in size. *Abdomen*: slender to elongate ovoid; colour markings sometimes conspicuous; occasionally clothed in minute iridescent setae; spinnerets rarely subequal in length, posteriors usually longest with long terminal article; position of colulus sometimes indicated by three to four setae; anal tubercle a moderately well developed cone; tracheal system (of *A. tenuipes*) evidently simply branched and not protruding into cephalothorax. *Legs*: long and slender, fringes occasionally present; spines numerous, long and moderately robust; claws pectinate, tufts present, scopulae absent. *Female palps*: long and slender with apical claw. *Male palps*: complex, generally interspecifically distinct. Femora with ventral furrow, usually fringed in setae, opening into apical apophysis; patellae without apophyses; tibiae with dorsal and retrolateral apophyses, the latter usually anvil-shaped; cymbium moderately deep, fringed in long setae; embolus (e) long, curved and slender, arising from basal margin of tegulum, free from embolic guide, but resting distally in lateral tegular groove; tegulum (t) more or less ovoid in ventral view, margins modified to form embolic guide (eg) which is sometimes provided with distal flange (f); pars pendula apparently lacking; subtegulum (st) bulbus with sinuous ducts, occasionally with opaque whitish patch or swelling in region of apophysis (m) (c.f. *Pandisus*). *Epigynes*: variable in form. Atrium undivided, with median septum, or covered by median scape; introductory ducts, sometimes coiled; primary spermathecae more or less ovoid with lanceolate fertilization ducts; secondary spermathecae apparently lacking; tubular gland-like ducts sometimes present.

**DIAGNOSIS.** *Asemonea* is easily distinguished from *Pandisus* and *Macopaeus* by the eye pattern (Fig. 2D) and from *Goleba* by the presence of the palpal femoral furrow in males and by the appearance of the epigyne in females.

### List of species in the genus *Asemonea* O. P.-Cambridge

- Asemonea crinita* sp. n.  
*A. cristata* Thorell, 1895  
*A. fimbriata* sp. n.  
*A. liberiensis* sp. n.  
*A. maculata* sp. n.  
*A. minuta* sp. n.  
*A. murphyi* sp. n.  
*A. ornatissima* Peckham, Peckham & Wheeler, 1888  
*A. picta* Thorell, 1895  
*A. pinangensis* sp. n.  
*A. pulchra* Berland & Millot, 1941  
*A. stella* sp. n.  
*A. tenuipes* O. P.-Cambridge, 1869

### Key to species of *Asemonea*

**Males** (males of *liberiensis*, *ornatissima* and *picta* are unknown)

- |   |   |                                  |
|---|---|----------------------------------|
| 1 | Tegular flange (f) present (Fig. 10F) . . . . .   | 2                                |
| — | Tegular flange absent (Fig. 15E) . . . . .  | 5                                |
| 2 | Tibiae of legs I–II densely fringed in setae (Fig. 10C); palp as in Fig. 10B, E, F (Angola) |                                  |
|   | . . . . . <i>fimbriata</i> sp. n. (p. 229)  |                                  |
| — | Tibiae of legs I–II not densely fringed; palp otherwise . . . . .                           | 3                                |
| 3 | Palpal tibiae with dorsal peg-like spines (Fig. 19C) (Burma) . . . . .                      | <i>cristata</i> Thorell (p. 242) |
| — | Palpal tibiae without dorsal peg-like spines . . . . .                                      | 4                                |
| 4 | Palpal tibiae with large complex dorsal apophysis (Fig. 13C) (Ivory Coast)                  | <i>maculata</i>                  |
|   | sp. n. (p. 233)   |                                  |
| — | Palpal tibiae with simple dorsal apophysis (Fig. 11C) (Kenya) . . . . .                     | <i>murphyi</i> sp. n. (p. 231)   |

- |   |  |   |
|---|--|---|
| 5 | Abdomen with hair tufts (Fig. 14A, B; 18A)   | 6   |
| — | Abdomen without hair tufts   | 7   |
| 6 | Femoral apophysis elongate, curved and distally bifid (Fig. 18B, C) (Burma, India, Sri Lanka)                                | <i>tenuipes</i> O. P. -Cambridge (p. 240) |
| — | Femoral apophysis short and distally acute (Fig. 14C) (West Africa)  | <i>crinita</i> sp. n. (p. 234)            |
| 7 | Femoral apophysis slender (Figs 9C, 11C, 21D)  | 8   |
| — | Femoral apophysis broad (Figs 15C, 16C)  | 9   |
| 8 | Body with extensive black markings (Fig. 21A); femoral apophysis bent distally (Fig. 21D) (Malaysia).                        | <i>pinangensis</i> sp. n. (p. 244)        |
| — | Body without extensive black markings (Fig. 9A); femoral apophysis gently curved (Fig. 9C) (Angola)                          | <i>minuta</i> sp. n. (p. 228)             |
| 9 | Abdomen light coloured with dorsal stellate marking (Fig. 16A, 28A); femoral apophysis with distal groove (Fig. 16C) (Kenya) | <i>stella</i> sp. n. (p. 237)             |
| — | Abdomen with extensive black markings dorsally (Fig. 15A); femoral apophysis without distal groove (Fig. 15C) (West Africa)  | <i>pulchra</i> Berland & Millot (p. 234)  |

**Females** (females of *crinita*, *cristata*, *fimbriata*, *maculata*, *minuta* and *pinangensis* are unknown)

- |   |   |  |   |
|---|---|--|---|
| 1 | Epigynal atrium broad with pipe-like spermathecae and coiled ducts anteriorly (Fig. 8C) (West Africa)   | <i>liberiensis</i> sp. n. (p. 228)                     | 2 |
| — | Epigyne otherwise   |  |   |
| 2 | Epigyne with lens-shaped pouches medially and anteriorly (Fig. 18G–I) (Oriental region)   | <i>tenuipes</i> O. P.-Cambridge (p. 240)               | 3 |
| — | Epigyne otherwise   |  | 4 |
| 3 | Epigyne with pronounced or recumbent scape (Figs 12A; 17C, D; 20C)  |  | 6 |
| — | Epigyne with median septum and marginal gland-like tubules (Figs 15F–H; 16E)  |  | 5 |
| 4 | Scape lobe-like with median depression (Fig. 12A–C) (Kenya)   | <i>murphyi</i> sp. n. (p. 231)                         |   |
| — | Scape broadly subtriangular (Figs 17C, D; 20C)  |  |   |
| 5 | Epigyne with indistinct anterior depression (Fig. 17C, D) (Madagascar)  | <i>ornatissima</i> Peckham, Peckham & Wheeler (p. 239) |   |
| — | Epigynal depression lacking (Fig. 20C) (Burma)  | <i>picta</i> Thorell (p. 243)                          |   |
| 6 | Eye region black with black bands extending to posterior thoracic margin, abdomen pale yellowish with extensive black dorsal markings (Fig. 15A) (West and Central Africa)                      | <i>pulchra</i> Berland & Millot (p. 234)               |   |
| 7 | Eye region whitish yellow with black v-shaped mark on thoracic part, abdomen whitish yellow with two black dorsal markings anteriorly and distinctive stellate mark medially (Fig. 16A) (Kenya) | <i>stella</i> sp. n. (p. 237)                          |   |

*Asemonea liberiensis* sp. n.

(Fig. 8A–C)

**DIAGNOSIS.** *A. liberiensis* does not appear to be closely related to any other known species of *Asemonea* from which it can readily be distinguished by the coiled epigynal ducts (Fig. 8C).

**MALE.** Unknown.

**FEMALE HOLOTYPE.** *Carapace* (Fig. 8A–B): pale amber to whitish yellow. *Eyes*: with black surrounds except AM. *Clypeus*: clothed in recumbent silky white hairs. *Chelicerae*: pale yellow with scattered fine pale yellowish hairs; promargin with 3 teeth, retromargin with 7. *Maxillae and labium*: pale yellow. *Sternum*: whitish yellow. *Coxae*: pale yellow. *Abdomen*: pale yellow with blackish markings; spinnerets robust, posteriors longest; pale yellow. *Legs*: pale yellow with black lateral spots on apices of tibiae II to IV and basal part of tibiae IV; spines strong and numerous on legs I–II, but fewer and weaker on legs III–IV, anterior leg spines arising from dark spots. Spinnation of legs I: metatarsi V 4–2–0, P 0–0–1, R 0–0–1; tibiae V 4–4–0, P 0–0–1, R 0–0–1; femora P 0–0–1. D 1–1–1. *Epigyne* (Fig. 8C): posterior margin of atrium irregular.

*Dimensions* (mm): total length 4.6; carapace length 2.0, breadth 1.52, height 0.92; abdomen length 2.6; eyes AM row 0.96, AL row 1.22, PM row 0.78, PL row 0.84; quadrangle length 0.72. *Ratios*: AM : AL : PM : PL : 11.5 : 6 : 4 : 5; AM : CL 11.5 : 5.

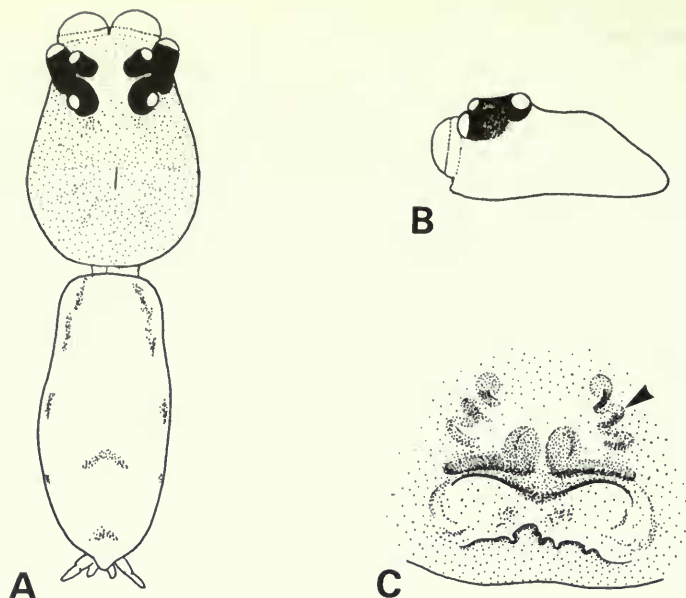


Fig. 8 *Asemonea liberiensis* sp. n., holotype ♀: A, dorsal view; B, carapace, lateral view; C, epigyne.

DISTRIBUTION. Liberia.

MATERIAL EXAMINED. **Liberia**, Pehata, holotype ♀, 1926 (G. M. Allen, R. P. Strong Exped., 1926) (MCZ, Harvard).

*Asemonea minuta* sp. n.

(Fig. 9A-E)

DIAGNOSIS. *A. minuta* is most closely related to *A. pinangensis*, from which it may be distinguished by the absence of heavy black markings (Fig. 9A), the shape of the femoral apophysis, the lack of a lip on the dorsal tibial apophysis (Fig. 9C) and distribution.

FEMALE. Unknown.

MALE HOLOTYPE. *Carapace* (Fig. 9A-B): pale yellow and weakly iridescent green with indistinct borderline and faint bands from PL to thoracic margin. *Eyes*: with black surrounds except AM; AM fringed in whitish hairs. *Clypeus*: whitish yellow with very obscure darker margins below AM. *Chelicerae*: whitish yellow, shiny; promargin with 2 teeth, retromargin with 3. *Maxillae, labium, sternum and coxae*: whitish yellow. *Abdomen*: pale yellow with faint longitudinal black bands; spinnerets pale yellow, posteriors longest with conical terminal article. *Legs*: whitish yellow; spines numerous, long and slender, but very pale. Spination of legs I: metatarsi V 2-4-0, P 0-0-1, R 0-0-1; tibiae V 2-4-2, D 0-1-0; femora P 0-0-1, D 1-1-1. *Palp* (Fig. 9C-E): small and lightly sclerotized.

*Dimensions* (mm): total length 2.6; carapace length 1.1, breadth 0.9, height 0.6; abdomen length 1.4; eyes, AM row 0.56, AL row 0.7, PM row 0.48, PL row 0.51; quadrangle length 0.44. *Ratios*: AM : AL : PM : PL : 6.5 : 3.1 : 2 : 2.5; AM : CL : 6.5 : 3.

DISTRIBUTION. Angola.

MATERIAL EXAMINED. **Angola**: Cacanda, holotype ♂, with sweep net, 23.ix.1946 (A. de Barros Machado, Ang. 30.2) (BMNH).



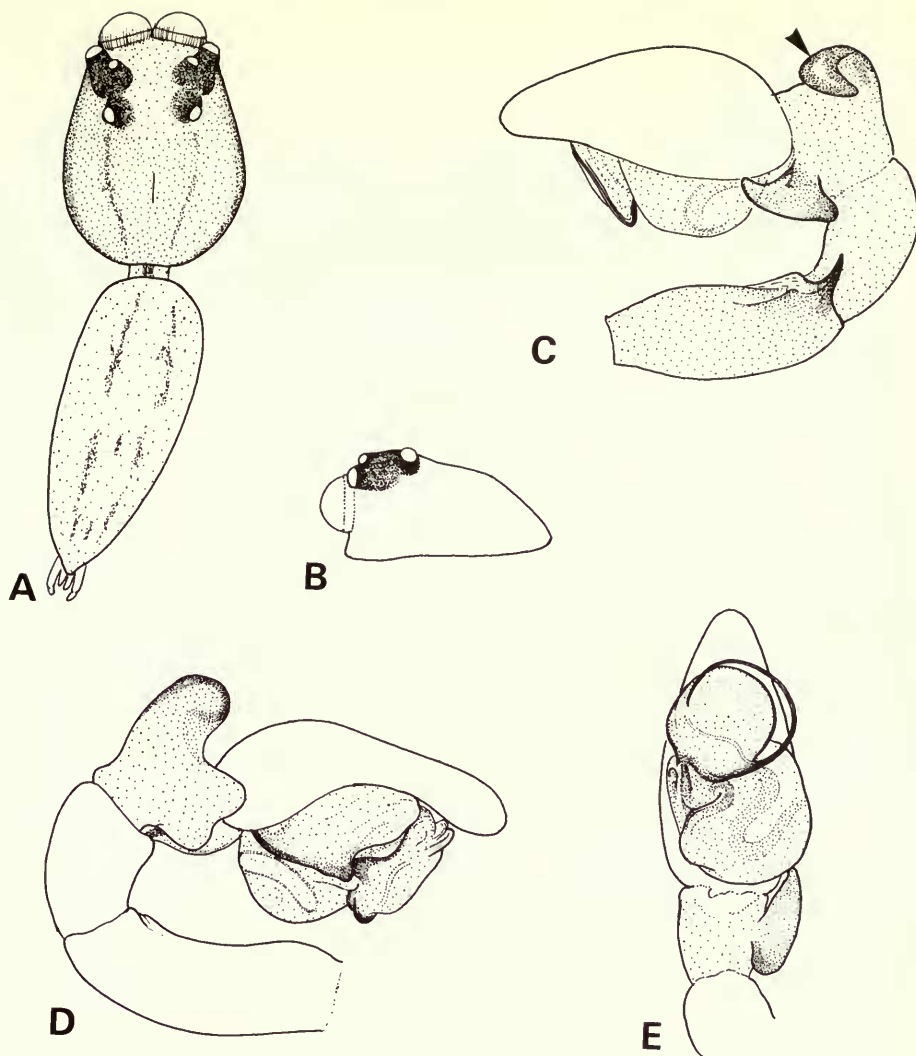


Fig. 9 *Asemonea minuta* sp. n., holotype ♂: A, dorsal view; B, carapace, lateral view; C, palp, ectal view; D, palp, ental view; E, palp, ventral view.

*Asemonea fimbriata* sp. n.

(Fig. 10A–F)

DIAGNOSIS. *A. fimbriata* is a distinctive species which seems to be most closely related to *A. murphyi*, but may be easily distinguished by the fringes of stiff hairs on tibiae I–II (Fig. 10C).

FEMALE. Unknown.

MALE HOLOTYPE. *Carapace* (Fig. 10A, D): pale amber with central whitish yellow band; thinly clothed in short dark amber hairs with scattered long pale yellow and silky white hairs in eye region. *Eyes*: with black surrounds except AM; AM fringed in whitish hairs. *Clypeus*: thinly clothed in fine whitish hairs. *Chelicerae*: pale yellow, shiny; promargin with 3 teeth, retromargin with 5. *Maxillae, labium, sternum and coxae*: pale yellow, shiny. *Abdomen*: pale yellow with vague blackish markings; thinly covered in erect amber hairs; spinnerets pale yellow thinly clothed in amber hairs, posteriors slightly longer than anteriors with

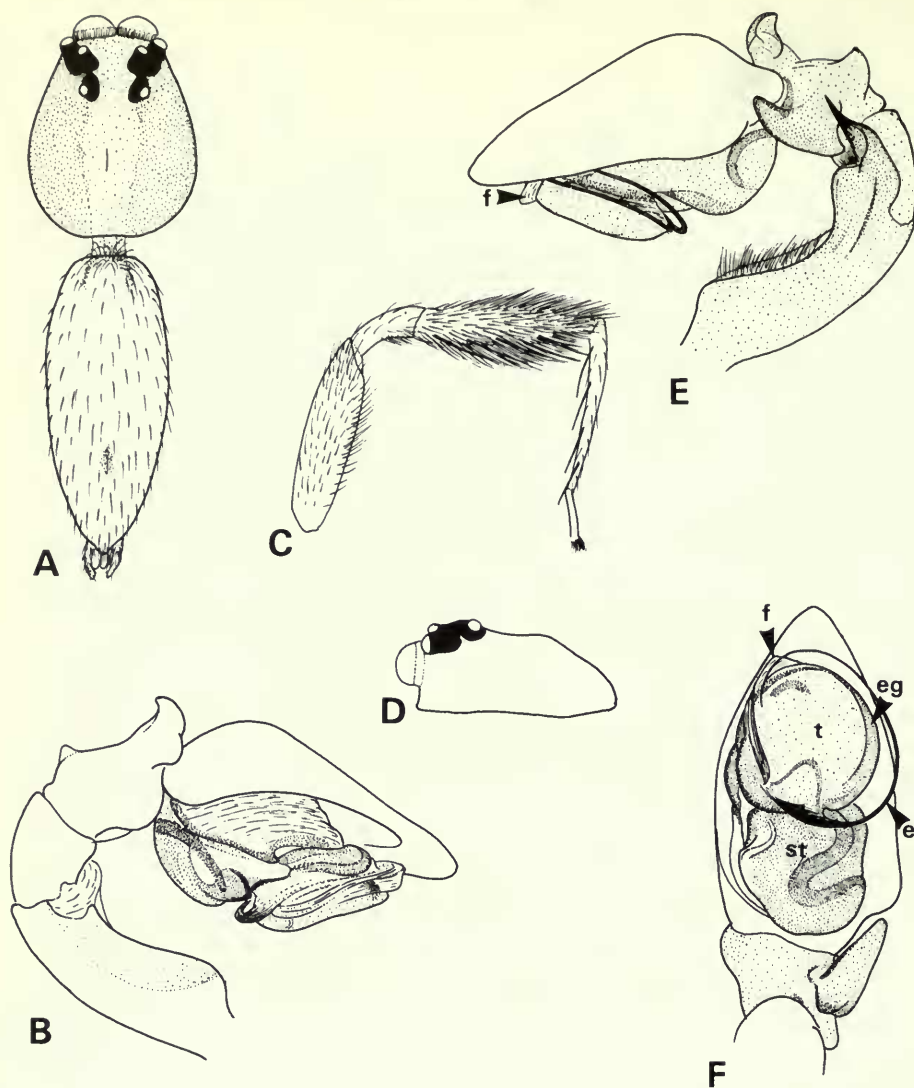


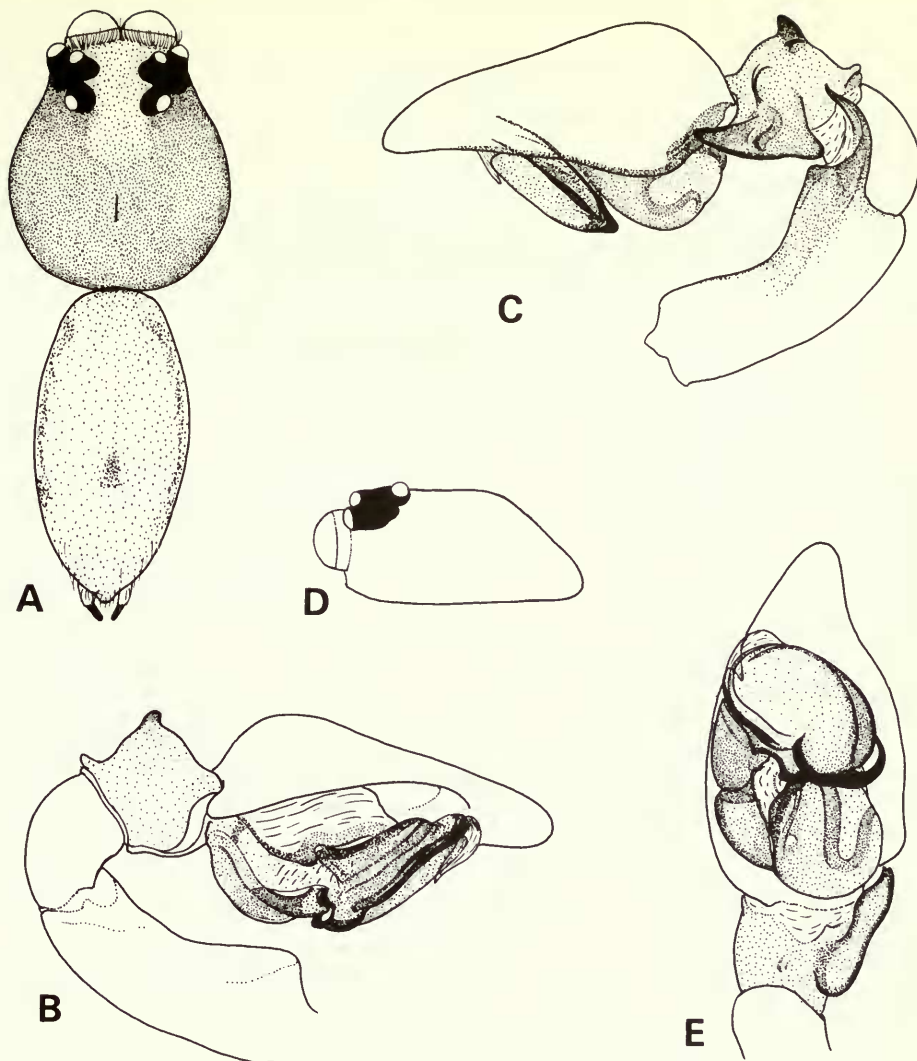
Fig. 10 *Asemonea fimbriata* sp. n., holotype ♂: A, dorsal view; B, palp, ental view; C, leg I; D, carapace lateral view; E, palp, ectal view; F, palp, ventral view.

conical terminal article. *Legs*: legs I–II pale yellow with tibiae and distal half of femora brownish, also dense black fringes on tibiae and underside of patellae; other legs yellowish with lighter femora and very scanty fringes on tibiae and patellae; spines long and numerous, pale to dark amber. Spination of legs I: metatarsi V 2–4–0, P 0–0–1, R 0–0–1; tibiae V 4–4–2; femora P 0–1–2, D 1–1–2. *Palp* (Fig. 10B, E, F): tegular flange (f) well developed.

*Dimensions* (mm): total length 4.6; carapace length 1.9, breadth 1.6, height 0.8; abdomen length 2.6; eyes, AM row 0.78, AL row 0.96, PM row 0.64, PL row 0.72; quadrangle length 0.56. *Ratios*: AM : AL : PM : PL : 10 : 5 : 3 : 3.7; AM : CL : 10 : 4.5.

*DISTRIBUTION*. Angola.

*MATERIAL EXAMINED*. Angola: Dundo, R. Mussungue, holotype ♂, 700 m, viii.1971 (*A. de Barros Machado*, Ang. 22734) (BMNH).



**Fig. 11** *Asemonea murphyi* sp. n., holotype ♂: A, dorsal view; B, palp, ental view; C, palp, ectal view; D, carapace lateral view; E, palp, ventral view.

*Asemonea murphyi* sp. n.  
(Figs 11A–E; 12A–C; 27A, B)

**DIAGNOSIS.** *A. murphyi* seems to be most closely related to *A. fimbriata*, but may be distinguished by the absence of fringes on legs I–II and palpal structure (Fig. 11B, C, E) in males. The epigyne (Fig. 12A–C) readily separates females of this species from other known species of *Asemonea*.

**MALE HOLOTYPE.** *Carapace* (Fig. 11A, D): yellow-brown, weakly iridescent green with eye region whitish and glossy under some angles of illumination, lateral margins lightly tinged black. *Eyes*: with black surrounds except AM; fringed in whitish hairs. *Clypeus*: pale yellow with sooty markings. *Chelicerae*: pale yellow basally tinged black; teeth not examined. *Maxillae, labium, sternum and coxae*: whitish yellow, shiny. *Abdomen*: pale yellow with faint sooty markings; sparsely clothed in long fine pale amber hairs; spinnerets pale yellow except for posteriors which have elongate black terminal articles. *Legs*: legs I whitish yellow

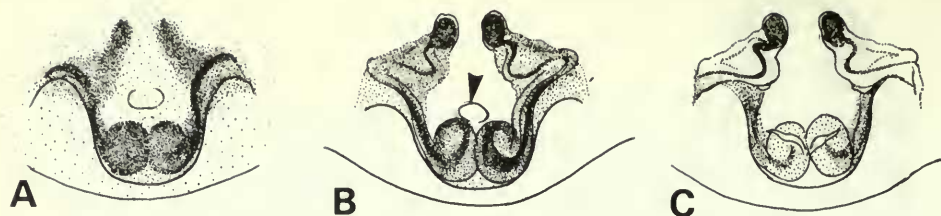


Fig. 12 *Asemonea murphyi* sp. n., paratype ♀: A, epigyne; B, vulva, ventral view; C, vulva, dorsal view.

to yellow-brown, tibiae grading to dark amber distally, also lateral sides of tarsi black, retrolateral sides of tibiae and femora with sooty stripes becoming black distally; other legs whitish yellow to yellow-brown with distal lateral spots on tibiae; spines strong and numerous. Spination of legs I: metatarsi V 2-2-1, P 1-0-2, R 1-0-2; tibiae V 2-2-2, P 1-0-1, D 1-1-0, R 0-1-1; patellae P 0-1-0, R 0-1-0; femora P 0-0-2, D 1-1-2. *Palp* (Fig. 11B, C, E): dorsal tibial apophysis bifurcate, best seen in posterior view.

*Dimensions* (mm): total length 3.92; carapace length 1.78, breadth 1.58, height 0.84; abdomen length 2.18; eyes, AM row 0.8, AL row 1.04, PM row 0.7, PL row 0.78, quadrangle length 0.54. *Ratios*: AM : AL : PM : PL : 10 : 4.4 : 3 : 4; AM : CL : 10 : 4.5.

**FEMALE PARATYPE.** *Carapace*: pale yellow grading to whitish yellow in eye region with irregular black spots on thoracic part, possibly remains of black bands that originally extended from PL to posterior margin. *Eyes*: with black surrounds except AM; densely fringed in creamy white hairs. *Clypeus*: pale yellow, shiny; sparsely clothed in fine whitish hairs. *Chelicerae*: yellow-brown, shiny; teeth not examined. *Maxillae and labium*: pale yellow. *Sternum and coxae*: whitish yellow, shiny. *Abdomen*: whitish yellow with scattered black spots and bars (more or less as in *A. maculata* sp. n.); spinnerets pale yellow, clothed in fine clear hairs; posteriors moderately elongate. *Legs*: whitish yellow to pale yellow-brown with apical and basal black spots on sides of tibiae I and retrolateral sides of tibiae II-IV; spines moderately strong, less numerous on posterior legs. Spination of legs I: metatarsi V 4-2-0, P 0-0-1, R 0-0-1; tibiae V 4-2-2, P 0-0-1; femora P 0-0-2, D 1-1-1. *Epigyne* (Fig. 12A-C): a small depression in central area of scape (similar depression also present in epigyne of *A. ornatissima*).

*Dimensions* (mm): total length 3.4; carapace length 1.52, breadth 1.2, height 0.8; abdomen length 1.96; eyes, AM row 0.68, AL row 0.92, PM row 0.6, PL row 0.67; quadrangle length 0.48. *Ratios*: AM : AL : PM : PL : 8.4 : 4.5 : 3 : 3.5; AM : CL : 8.4 : 4.

**VARIATION.** Paratype ♀ from Kitale 3.42 mm total length, 1.48 mm carapace length.

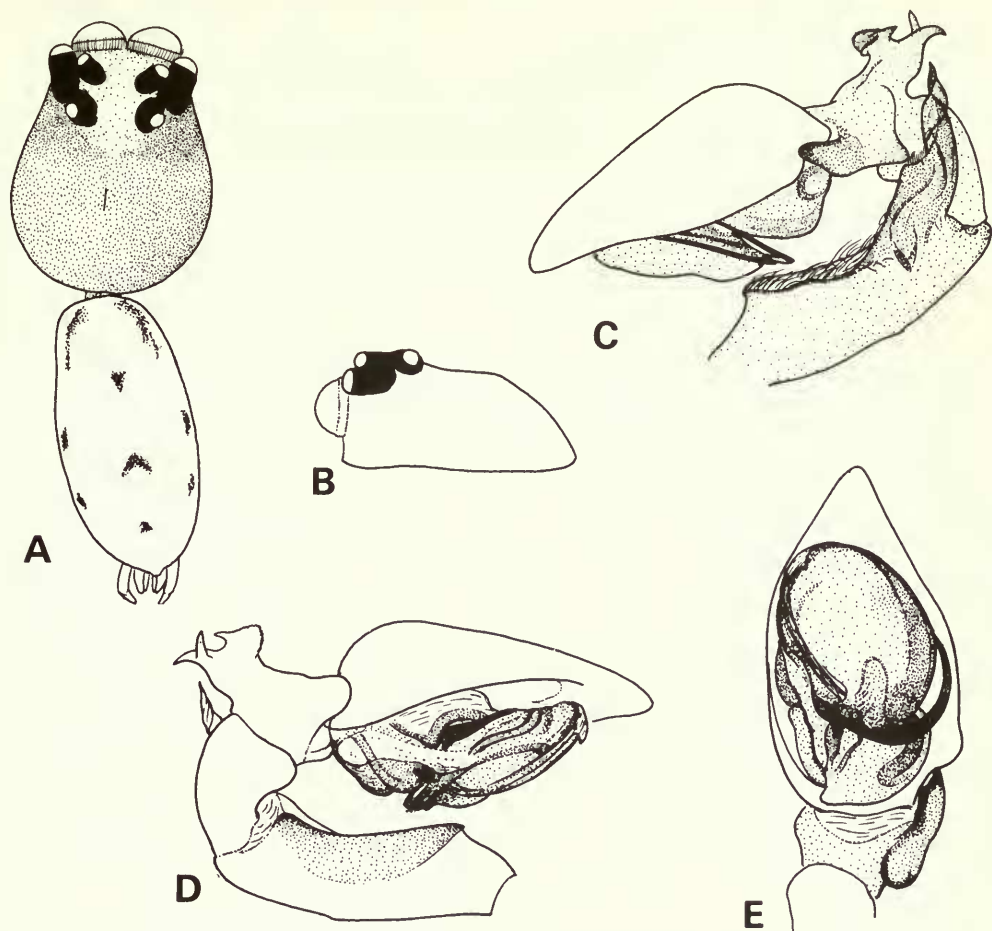
**BIOLOGY.** Captive specimens kept by Mrs F. Murphy all made a sheet web in the top of their cage in which they normally rested upside down. They all appeared to locate their prey by sight. One female laid several batches of two or three whitish green eggs which were placed naked in the sheet web, unfortunately none of the eggs hatched, the first batch disappeared, presumably eaten. Although moulting was not observed several exuvia were seen hanging upside down below the sheet web. It seems reasonable to suggest that *Asemonea* species moult in the open and not inside a silken cell as is the case with many other salticids.

**DISTRIBUTION.** Kenya.

**MATERIAL EXAMINED.** **Kenya**: Naro Moru, beaten from shaded bushes on riverside path, 2000 m, holotype ♂, 17.viii.1974, taken alive, matured in captivity and killed 19.vi.1975 (J. & F. Murphy, 4336) (BMNH. 1979. 9.20.1); Kitale Forest, paratype ♀, beaten from low shrubs at edge of grassy track, 4.viii.1972 (J. & F. Murphy, 1549); Kitale Forest, paratype ♀, taken 22.vii.1974, died 1.ii.1975 (J. & F. Murphy, 3661) (BMNH).



**ETYMOLOGY.** This species is named after Mrs F. Murphy, London, who has helped me in various ways by providing photographs, rearing juvenile tropical salticids through to adulthood and allowing me to use her unpublished observations.



**Fig. 13** *Asemonea maculata* sp. n., holotype ♂: A, dorsal view; B, carapace, lateral view; C, palp, ectal view; D, palp, ental view; E, palp, ventral view.

*Asemonea maculata* sp. n.

(Fig. 13A–E)

**DIAGNOSIS.** *A. maculata* is a distinctive species readily separated from other known species of *Asemonea* by the form of the grotesque palpal tibiae (Fig. 13C, D).

**FEMALE.** Unknown.

**MALE HOLOTYPE.** *Carapace* (Fig. 13A, B): pale amber grading to whitish yellow in eye region, glossy under some angles of illumination. *Eyes*: with black surrounds except AM; fringed in silky white hairs. *Clypeus*: pale yellow with sooty transverse band; thinly clothed in fine whitish hairs. *Chelicerae*: pale yellow with sooty markings; teeth not examined. *Maxillae and labium*: pale yellowish. *Sternum and coxae*: whitish yellow, shiny. *Abdomen*: whitish yellow with black spots; thinly clothed in very fine weakly iridescent setae; spinnerets whitish yellow, posteriors elongate with long terminal article. *Legs*: legs I whitish yellow with black tarsi and black lateral stripes on tibiae, patellae and femora; other legs whitish

yellow with black streaks at either end of tibiae IV; spines strong and numerous. Spination of legs I: metatarsi V 2-4-2, R 1-0-0; tibiae V 4-4-0, P 0-0-1, D 0-1-0, R 0-0-1; femora P 0-0-1, D 1-1-2. *Palp* (Fig. 13C-E): tegular flange moderately well developed.

*Dimensions* (mm): total length 4.56; carapace length 2.08, breadth 1.8, height 1.04; abdomen length 2.4; eyes, AM row 1.0, AL row 1.28, PM row 0.82, PL row 0.88; quadrangle length 0.68. *Ratios*: AM : AL : PM : PL : 12 : 6 : 4 : 5; AM : CL : 12 : 6.

VARIATION. Paratype ♂ 4.7 mm total length, 2.10 mm carapace length.

DISTRIBUTION. Ivory Coast.

MATERIAL EXAMINED. **Ivory Coast**: environs of Kotiessou, R. Bandama, holotype ♂, from Bushes, (*J. Jezequell*, B3. 24) (MNHN, Paris). Paratype: 1♂, same data as holotype except vial B3.25, (BMNH).

### *Asemonea crinita* sp. n.

(Fig. 14A-E)

DIAGNOSIS. *A. crinita* is an extraordinary looking species easily distinguished from other species of *Asemonea* by the palp (Fig. 14C-E) and ornate bent abdomen (Fig. 14A, B).

FEMALE. Unknown.

MALE HOLOTYPE. *Carapace* (Fig. 14A, B): amber grading to pale yellowish in eye region; thinly clothed in orange hairs on thoracic part. *Eyes*: with black surrounds except AM; fringed in fine silky white hairs. *Clypeus*: sparsely clothed in whitish hairs. *Chelicerae*: pale yellow; promargin with 3 teeth, retromargin with 4 or 5. *Maxillae and labium*: pale yellow. *Sternum and coxae*: whitish yellow, shiny. *Abdomen*: posteriorly bent; whitish yellow lightly tinged black; conspicuously fringed with tufts of coarse dark amber hairs; spinnerets pale yellow tinged black, posteriors elongate with long terminal article. *Legs*: pale yellow with blackish streaks on femora III-IV; spines moderately strong and numerous, but pale. Spination of legs I: metatarsi V 4-2-1, P 1-0-1, R 1-0-1; tibiae V 4-2-0, P 0-1-1, D 0-1-0, R 0-1-1; patellae P 0-1-0, R 0-1-0; femora P 0-0-2, D 0-1-1. *Palp* (Fig. 14C-E): tegular flange evidently lacking.

*Dimensions* (mm): total length 5.2 mm; carapace length 1.68, breadth 1.52, height 0.92; abdomen length 3.56; eyes, AM row 1.0, AL row 1.28, PM row 0.84, PL row 0.94; quadrangle length 0.62. *Ratios*: AM : AL : PM : PL : 12.5 : 6 : 4 : 5; AM : CL : 12.5 : 4.

VARIATION. Paratype ♂ from Lamto 5.3 mm total length, 1.68 mm carapace length. As both the holotype and paratype specimens have the abdomen posteriorly bent it is assumed that this is a natural condition and not an artifact of preservation.

DISTRIBUTION. Ivory Coast.

MATERIAL EXAMINED. **Ivory Coast**: environs of Kotiessou, R. Bandama, holotype ♂, (*J. Jezequel*, B6.14) (MNHN, Paris). Paratype: 1♂, same data as holotype except vial B6. 1, (BMNH).

### *Asemonea pulchra* Berland & Millot

(Fig. 15A-H)

*Asemonea pulchra* Berland & Millot, 1941 : 401, ♂. Holotype ♂, Mali (MNHN, Paris) [examined].

Clark, 1974 : 12.

*Asamonea pulchra*: Roewer, 1954 : 927, 1965 : 4 [unjustified emendation].

DIAGNOSIS. *A. pulchra* is closely related to *A. stella*, but may be readily distinguished by the distinctive black markings (Fig. 15A) and absence of a distal furrow on the palpal femoral apophysis (Fig. 15B, arrowed). The epigynes, which are sometimes plugged, are very similar and cannot always be distinguished with certainty.

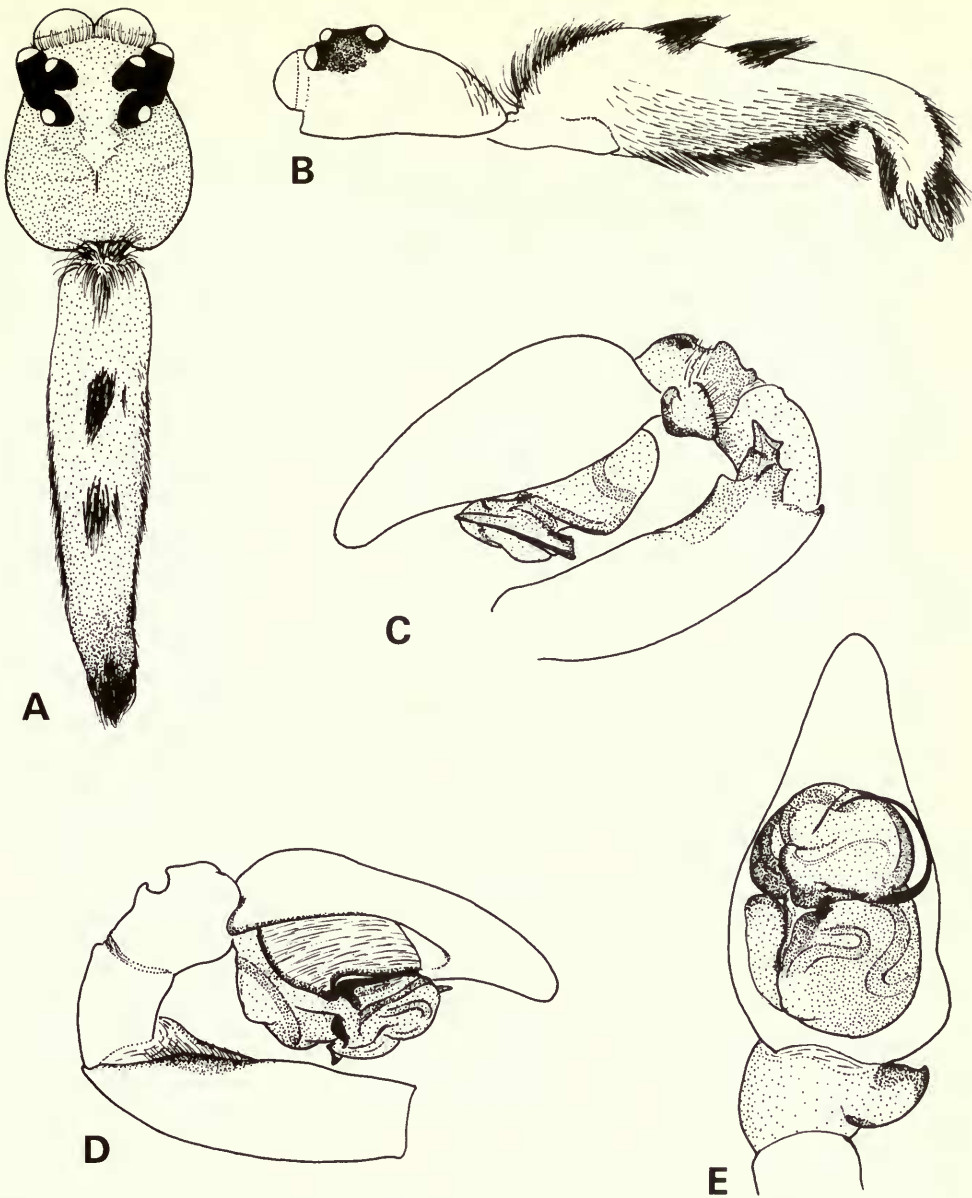


Fig. 14 *Asemonea crinita* sp. n., holotype ♂: A, dorsal view; B, lateral view; C, palp, ectal view, D, palp, ental view; E, palp, ventral view.

**MALE HOLOTYPE.** *Carapace*: whitish yellow with blackish eye region and black bands extending from posterior lateral eyes to posterior thoracic margin, the bands weakly iridescent green under some angles of illumination. *Eyes*: with black surrounds; fringed in whitish hairs. *Clypeus*: whitish yellow with black transverse band. *Chelicerae*: pale yellow, shiny, teeth not examined. *Maxillae, labium, sternum and coxae*: whitish yellow. *Abdomen*: yellow-brown tinged black with black markings; thinly clothed in long clear yellow-brown hairs; spinnerets black, fringed in brownish hairs, posteriors elongate with moderately long terminal article. *Legs*: legs I whitish yellow with black tarsi and black lateral stripes on patellae and either end of tibiae; legs II–IV similar, but tarsi pale yellowish and femora IV

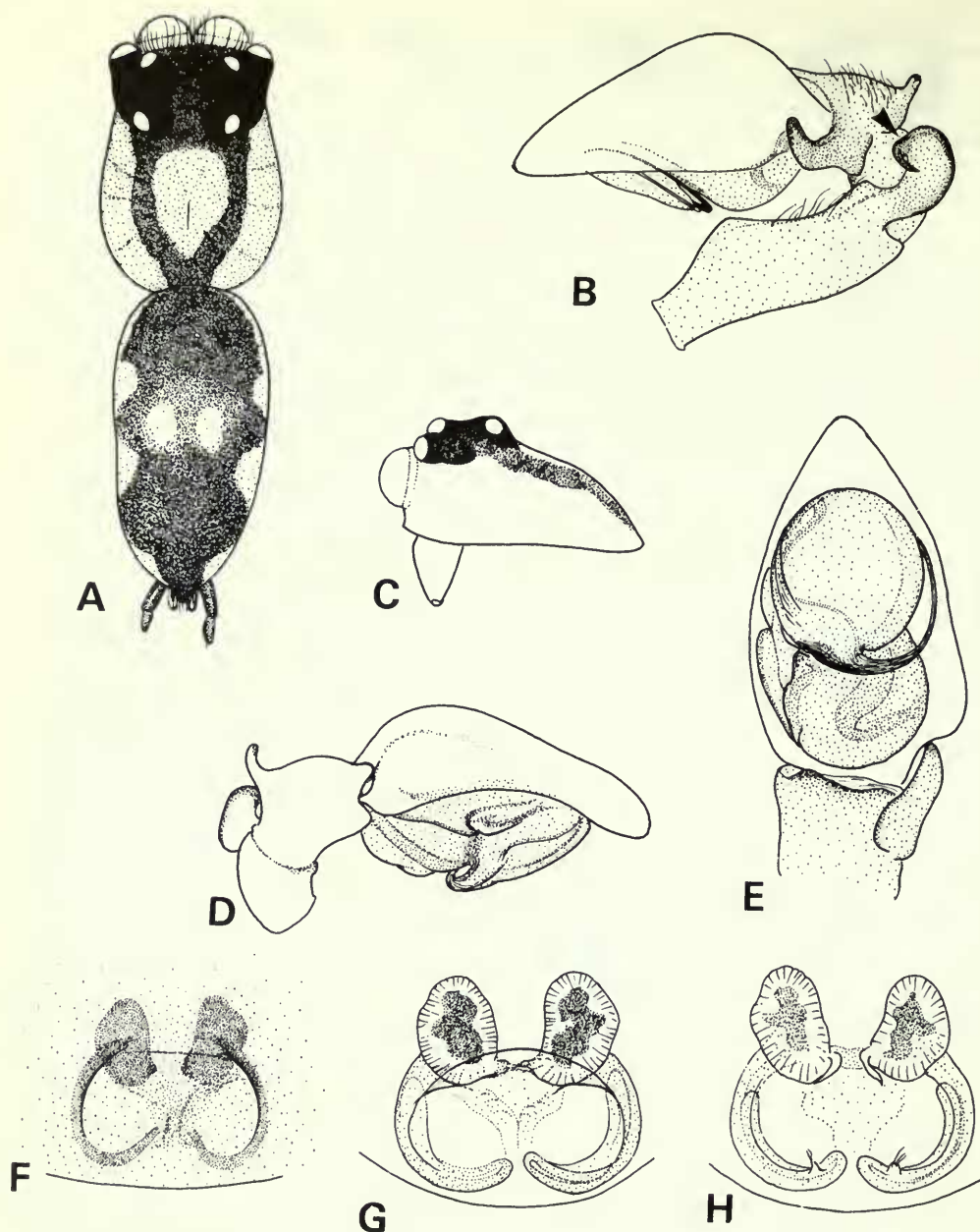


Fig. 15 *Asemonea pulchra* Berland & Millot, holotype ♂: B, palp, ectal view; D, palp, ental view; E, palp, ventral view. ♀ from Guinea: A, dorsal view; C, carapace, lateral view; F, epigyne; G, vulva, ventral view; H, vulva, dorsal view.

with apical black spots; spines moderately numerous and long, rather pale. Spination of legs I: metatarsi V 2-2-2, P 0-0-1, D 0-1-0, R 0-0-1; tibiae V 2-2-2, P 1-0-1, R 1-0-1; femora P 0-0-2, D 0-1-1, R 0-0-1. *Palp* (Fig. 15B, D, E): tegular flange lacking.

*Dimensions* (mm): total length 3.16; carapace length 1.4, breadth, 1.08, height 0.7; abdomen length 1.76; eyes, AM row 0.66, AL row 0.87, PM row 0.53, PL row 0.6; quad-angle length 0.44. *Ratios*: AM : AL : PM : PL : 8 : 4.5 : 3.2 : 3.5; AM : CL : 8 : 4.



**FEMALE** from Guinea (Fig. 15A, C). Similar to ♂ except for the following: *Clypeus*: pale yellow with black spot in lower space between AM; clothed in fine shining hairs. *Abdomen*: pale yellow with black dorsal markings; posterior spinnerets black, anteriors and medians yellow. *Legs*: pale yellow with distal black retrolateral streaks on tibiae and additional proximal streaks on tibiae III–IV. Spination of legs I: metatarsi V 4–2–0, P 0–0–1, R 0–0–1; tibiae V 4–2–0, P 0–0–1, R 0–0–1; femora P 0–0–2, D 1–1–1; also on underside of femora I–II a row of paired stiff bristles (also present in ♂, but pale and difficult to see). *Epigyne* (Fig. 15F, G, H): thinly clothed in pale yellowish hairs.

*Dimensions* (mm): total length 3.2; carapace length 1.45, breadth 1.08, height 0.78; abdomen length 1.76; eyes, AM row 0.68, AL row 0.98, PM row 0.6, PL row 0.67; quad-angle length 0.52. *Ratios*: AM : AL : PM : PL : 9 : 5 : 3.5 : 4; AM : CL : 9 : 3.5.

**VARIATION.** ♂ from Mali total length 3.28 mm, carapace length 1.4 mm; ♀ total length 2.9–3.2 mm, carapace length 1.36–1.45 mm (3 specimens). In one ♀ from Zaire the median septum and epigynal margins are more pronounced and as such cannot be distinguished from that of *A. stella* (Fig. 16E). Unrubbed ♀'s have a patch of short lanceolate orange setae between the anterior median and posterior median eyes.

**DISTRIBUTION.** Ghana; Guinea; Mali; Zaire.

**MATERIAL EXAMINED.** **Ghana:** Accra, Achimota, house, 1♀, v.1961 (*C.P. Hinkley*) (MCZ, Harvard). **Guinea:** Kéoulenta, 1♀, (BMNH). **Mali:** Bamako, holotype ♂, ix.1937 (*L. Berland*) (MNHN, Paris); Fana, 1♂, viii–ix.1971 (*G. Pierrard*, MT. 142.361) (MRAC, Tervuren). **Zaire:** Katanga, Luiswishi 28 km NE Lubumbashi, savannah, 1♂, (*F. Malaisse*, MT. 145.529) (MRAC, Tervuren).

### *Asemonea stella* sp. n.

(Figs 16A–F; 28)

**DIAGNOSIS.** *A. stella* is closely related to *A. pulchra*, but may be readily distinguished by the black star on the abdomen (Figs 16A; 28) and presence of a distal furrow on the palpal femoral apophysis (Fig. 16C, arrowed). The epigynes cannot be distinguished with certainty.

**MALE HOLOTYPE.** *Carapace* (Fig. 16A, D): pale yellow grading to whitish yellow in eye region with black v-shaped thoracic marking. *Eyes*: with black surrounds except AM; fringed in silky white hairs. *Clypeus*: pale yellow, shiny; teeth not examined. *Maxillae*, *labium*, *sternum* and *coxae*: pale yellow. *Abdomen*: whitish yellow, shiny, with distinctive black star and two black patches dorsally, underside whitish yellow with black patch in epigynal region; spinnerets black, fringed in dark brown hairs; posteriors elongate with moderately long terminal article; anal tubercle black. *Legs*: legs I pale yellow with black tarsi and black lateral patches on apices of tibiae; legs II–III pale yellow; legs IV pale yellow with black lateral spots at either end of tibiae; spines moderately robust, numerous and pale. Spination of legs I: metatarsi V 2–2–2, P 1–0–1, R 0–0–1; tibiae V 2–4–0, P 0–1–1, R 0–0–1; femora P 0–0–2, D 1–1–1. *Palp* (Fig. 16B, C, F): tegular flange lacking.

*Dimensions* (mm): total length 3.16; carapace length 1.44, breadth 1.13, height 0.72; abdomen length 1.76; eyes, AM row 0.64, AL row 0.84, PM row 0.54, PL row 0.60; quad-angle length 0.48. *Ratios*: AM : AL : PM : PL : 8 : 4 : 2.6 : 4; AM : CL : 8 : 4.

**FEMALE PARATYPE.** Similar to ♂ except for the following: *Carapace*: with blackish eye region. *Eyes*: fringed in pale yellow and orange hairs. *Abdomen*: anterior black markings more extensive forming a black patch; spinnerets pale yellow except posteriors which have black terminal articles and black dorsal streaks on basals. *Legs*: legs I–II whitish yellow to pale yellow with distal black retrolateral spots on tibiae; legs III–IV similar, but with additional spots proximally. Spination of legs I: metatarsi V 4–2–0, P 0–0–1; tibiae V 4–2–0, P 0–0–1, R 0–0–1; femora D 1–1–1, P 0–0–2. *Epigyne* (Fig. 16E): vulva not examined, but probably similar to that of *A. pulchra*.

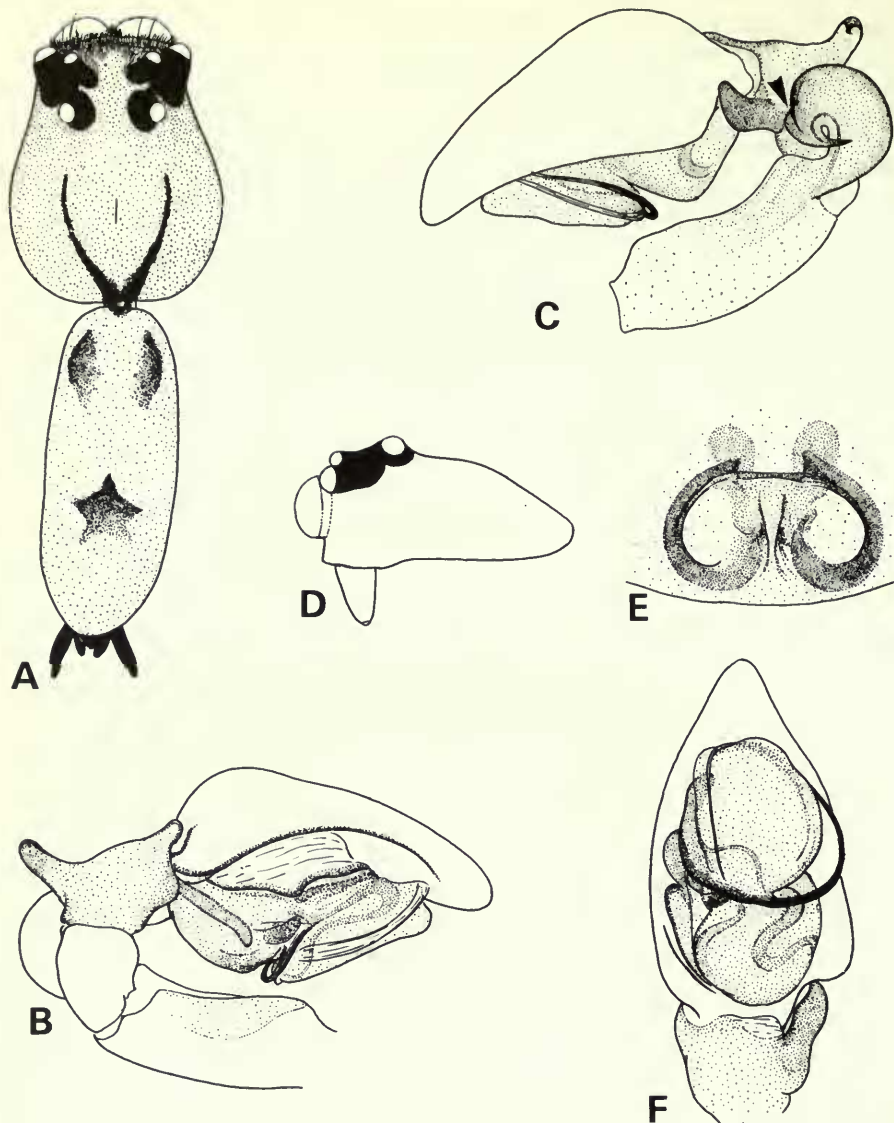


Fig. 16. *Asemonea stella* sp. n., holotype ♂: A, dorsal view; B, palp, ental view; C, palp, ectal view; D, carapace, lateral view; F, palp, ventral view. Paratype ♀: E, epigyne.

*Dimensions* (mm): total length 3.64; carapace length 1.46, breadth 1.1, height 0.8; abdomen length 2.04; eyes, AM row 0.68, AL row 0.94, PM row 0.6, PL row 0.65; quad-range length 0.51. Ratios: AM : AL : PM : PL : 8.5 : 4.6 : 3.5 : 4; AM : CL : 8.5 : 4.

VARIATION. ♂ from Kilifi total length 3.16 mm, carapace length 1.28 mm.

DISTRIBUTION. Kenya.

MATERIAL EXAMINED. **Kenya:** Kilifi, garden, holotype ♂, 6.ix.1977 (*J. & F. Murphy*, 6203) (BMNH. 1979.9.28.1); Kilifi, I. Salés, paratype ♀, 9.ix.1977 (*J. & F. Murphy*, 6207); Kilifi, beaten from hedge in open farm land about 200 yds from sea, paratype ♂, 11.viii.1974 (*J. & F. Murphy*, 4038) (BMNH).

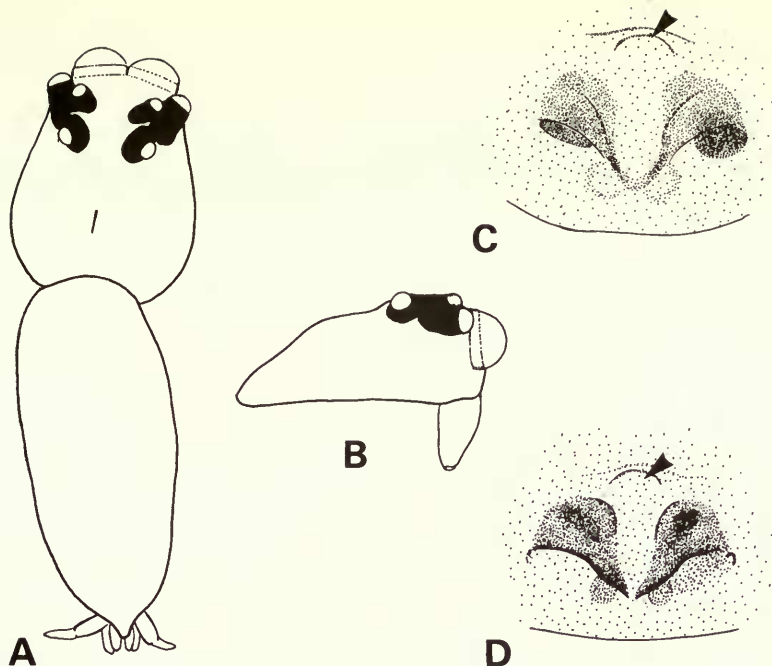


Fig. 17 *Asemonea ornatissima* Peckham, Peckham & Wheeler, lectotype ♀: B, carapace, lateral view; C, epigyne. *A. bella* Lenz, holotype ♀: A, dorsal view; D, epigyne.

*Asemonea ornatissima* Peckham, Peckham & Wheeler

(Fig. 17A–D)

*Asamonea ornatissima* Peckham, Peckham & Wheeler, 1888 : 244, ♀. LECTOTYPE ♀ (here designated) Madagascar (MCZ, Harvard) [examined]. Lenz, 1891 : 165. Roewer, 1954 : 927; 1965 : 4.

*Asemonea ornatissima*: Bonnet, 1955 : 763.

*Asanonea bella* Lenz, 1891 : 164, ♀. Holotype ♀, Madagascar (ZIZM, Hamburg) [examined]. Bonnet, 1955 : 763. Roewer, 1954 : 927. **Syn. n.**

*Asemonea bella*: Simon, 1901 : 396.

*Asamone bella*: Roewer, 1965 : 4 [spelling mistake].

**DIAGNOSIS.** *A. ornatissima* seems to be most closely related to *A. murphyi*, but may be distinguished by the structure of the epigyne (Fig. 17C, D).

**MALE.** Unknown.

**FEMALE**, holotype of *A. bella*. *Carapace* (Fig. 17A): pale amber, lighter in eye region. *Eyes*: with black surrounds except AM; fringed in silky white hairs. *Clypeus*: sparsely clothed in very fine whitish hairs. *Chelicerae*: pale yellow; thinly clothed in fine long hairs; teeth not examined. *Maxillae*, *labium*, *sternum* and *coxae*: pale yellow. *Abdomen*: uniformly pale yellow; spinnerets pale yellow, posteriors elongate with long terminal article. *Legs*: pale yellow; spines strong and numerous, but rather pale. Spination of legs I: metatarsi V 2–2–2, P 1–0–1, R 1–0–1; tibia V 2–4–0, P 0–0–1, R 1–0–1; femora P 0–0–2, D 0–0–2. *Epigyne* (Fig. 17D): anteriorly a shallow depression.

**Dimensions** (mm): total length 4.48; carapace length about 1.8, breadth 1.52, height 0.88; abdomen length 2.84; eyes, AM row 0.88, AL row 1.18, PM row 0.78, PL row 0.82; quad-angle length 0.64. **Ratios**: AM : AL : PM : PL : 11 : 5.5 : 4 : 5; AM : CL : 11 : 4.

**VARIATION.** ♀ lectotype of *A. ornatissima*, total length 4.3 mm, carapace (Fig. 17B) length 1.9 mm. The epigyne (Fig. 17C) is evidently plugged in mated females.

DISTRIBUTION. Madagascar.

MATERIAL EXAMINED. **Madagascar**: lectotype ♀ [of *A. ornatissima*] (MCZ, Harvard); Point v. Tamatave, holotype ♀ [of *A. bella*] (ZIZM, Hamburg, 12835).

*Asemonea tenuipes* O. P.-Cambridge

(Fig. 18A-I)

*Lyssomanes (Asemonea) tenuipes* O. P.-Cambridge, 1869 : 65, ♂. Holotype ♂, Sri Lanka, (UM, Oxford) [examined]. Savory, 1928 : 165.

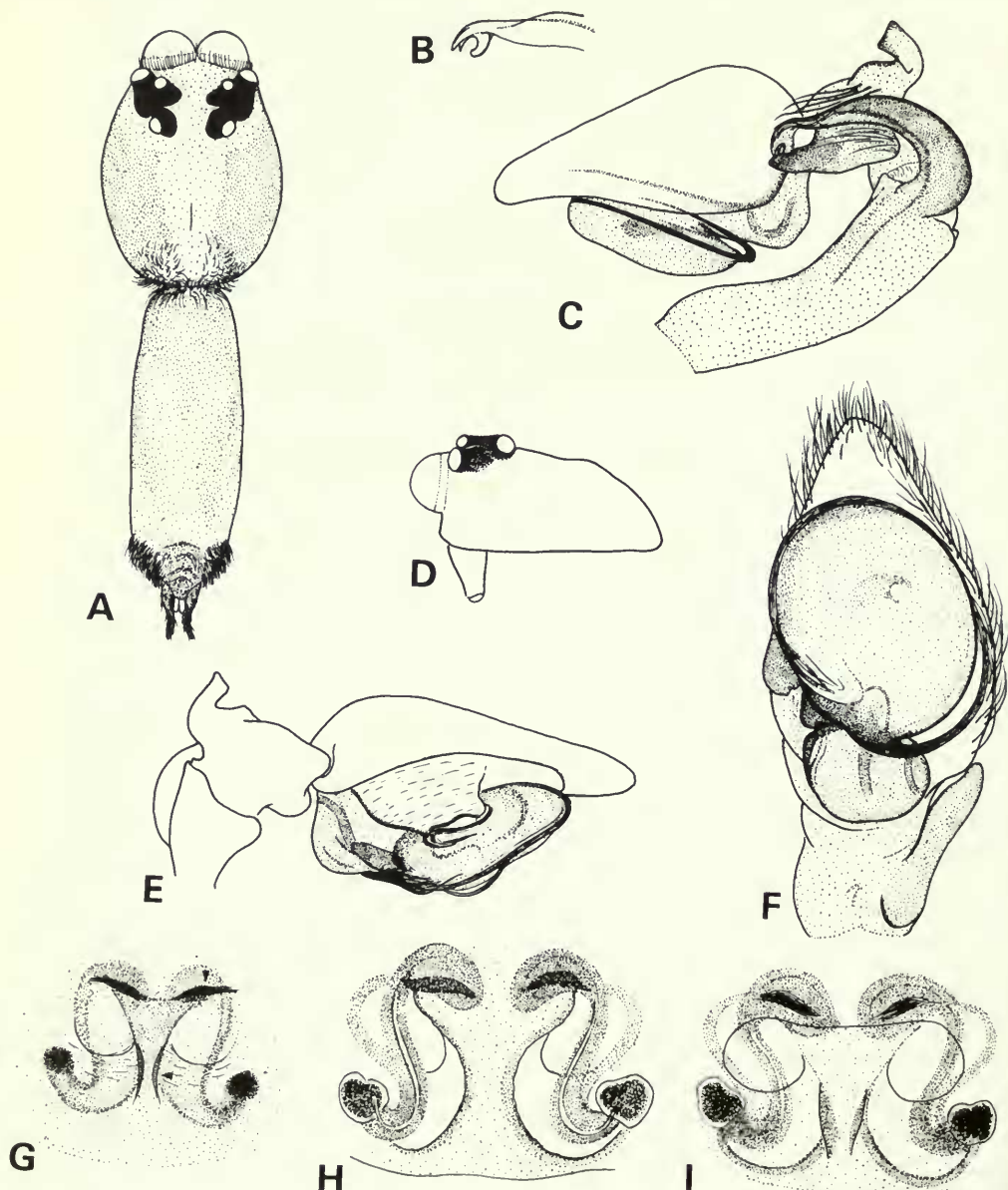


Fig. 18 *Asemonea tenuipes* O. P.-Cambridge, ♂ from Sri Lanka: A, dorsal, view; B, tip of femoral apophysis; C, palp, ectal view; D, carapace, lateral view; E, palp, ental view; F, palp, ventral view. ♀ from Sri Lanka: G, epigyne; H, vulva, dorsal view; I, vulva, ventral view.



*Asamonea tenuipes*: Simon, 1885 : 27. Peckham, Peckham & Wheeler, 1888 : 242, 243. Peckham & Peckham, 1889 : 31. Roewer, 1954 : 927.

*Asemonea tenuipes*: Thorell, 1895 : 319. Simon, 1901 : 391–396, 399. Petrunkevitch, 1928 : 181. Sherriffs, 1931 : 537. Bonnet, 1955 : 764; Wanless, 1979 : 185.

*Asemonea cingulata* Thorell, 1895 : 315, ♂. Holotype ♂, Burma (BMNH) [examined]. Simon, 1901 : 396. Sherriffs, 1931 : 537. Bonnet, 1955 : 763. **Syn. n.**

*Asamonea cingulata*: Roewer, 1954 : 927.

*Lyssomanes andamanensis* Tikader, 1977 : 205, ♂, ♀. Holotype ♂, allotype ♀, North Andaman, India (ZSI, Calcutta) [examined]. Tikader, 1978 : 258. **Syn. n.**

*Lyssomanes bengalensis* Tikader & Biswas, 1978 : 259, ♀. Holotype ♀, West Bengal, India (ZSI, Calcutta) [examined]. **Syn. n.**

**DIAGNOSIS.** *A. tenuipes* is a distinctive species readily distinguished from all other known species of *Asemonea* by the structure of the palps and epigyne (Fig. 18B, C, E–I).

**MALE** from Sri Lanka. *Carapace* (Fig. 18A, D): dark amber with eye region and median thoracic area whitish yellow; clothed in dark amber hairs posteriorly. *Eyes*: with black surrounds except AM; AM fringed in pale yellowish hairs, other eyes fringed in very fine weakly iridescent setae. *Clypeus*: clothed in iridescent setae, a black spot in lower vortex between AM. *Chelicerae*: pale amber; thinly clothed in fine light yellowish hairs; promargin with 3 teeth, retromargin with 5. *Maxillae and labium*: pale yellow partly tinged black. *Sternum and coxae*: pale yellow, shiny. *Abdomen*: whitish yellow, lightly tinged black with blackish posterior tip; thinly clothed in minute iridescent setae with tufts of coarse orange-brown hairs anteriorly and on either side of spinnerets; spinnerets whitish yellow tinged black, posteriors grey-black, elongate with curved terminal article. *Legs*: pale yellow with retrolateral stripes on tarsi, metatarsi, tibiae, patellae I–II and apices of femora I–III; spines strong and numerous, pale yellow. Spination of legs I: metatarsi V 2–2–0, P 0–0–1, R 1–0–1; tibiae V 2–4–0, P 0–0–1, R 0–0–1; femora P 0–0–2, D 1–1–1. *Palp* (Fig. 18B, C, E, F): retrolateral femoral apophysis well developed.

*Dimensions* (mm): total length 4.96; carapace length 1.68, breadth 1.56, height 0.84; abdomen length 2.92; eyes, AM row 0.88, AL row 1.0, PM row 0.62, PL row 0.69; quad-range length 0.6. *Ratios*: AM : AL : PM : PL : 10.5 : 4.5 : 2.8 : 3; AM : CL : 10.5 : 6.5.

**FEMALE** from Sri Lanka. *Carapace*: greyish yellow with paler head region. *Eyes*: with black surrounds except AM; fringed in fine silky white hairs. *Clypeus*: clothed in vertically layered silky white hairs that are weakly iridescent under some angles of illumination. *Chelicerae*: pale yellow to whitish, shiny. *Maxillae, labium, sternum and coxae*: more or less as in ♂. *Abdomen*: whitish yellow, fringes lacking. *Legs*: pale yellow with blackish lateral streaks on tarsi and on either end of tibiae IV; spines similar to ♂. Spination of legs I: metatarsi and tibiae V 2–4–0, P 0–0–1, R 0–0–1; femora P 0–0–2, D 1–1–1. *Epigyne* (Fig. 18G–I): openings indistinct.

*Dimensions* (mm): total length 4.2; carapace length 1.6, breadth 1.16, height 0.78; abdomen length 2.56; eyes, AM row 0.78, AL row 0.92, PM row 0.56, PL row 0.64; quad-range length 0.52. *Ratios*: AM : AL : PM : PL : 10 : 4 : 3 : 3.4; AM : CL : 10 : 4.5.

**VARIATION.** ♂ total length 3.84 to 4.96 mm, carapace length 1.64–2.0 mm (9 specimens); ♀ total length 3.76–4.2 mm, carapace length 1.52–1.72 mm (5 specimens).

**DISTRIBUTION.** Andaman Islands, Burma, India, Sri Lanka, Thailand.

**MATERIAL EXAMINED.** **Andaman Islands**: Tugapur, Mayabandar, holotype ♂, allotype ♀ [of *L. andamanensis*] 13.v.1971 (B. K. Tikader) (ZSI, Calcutta). **Burma**: Tharrawaddy, holotype ♂ [of *A. cingulata*] 1♀, (E. W. Oates) (BMNH), Tharrawaddy, 1♀ (E. W. Oates) (NR, Stockholm). **India**: West Bengal, Baikunthapur village, Baraipur, Dist., 24, holotype ♀ [of *L. bengalensis*] (Bijan Biswas) (ZSI, Calcutta). **Sri Lanka**: holotype ♂ [of *A. tenuipes*] (G. H. K. Thwaites) (UM, Oxford); 2♂♂, 1♀, no other data (BMNH); Badulla District, 1♂, 18.viii.1963 (M. Speight, Univ. Lond. Ceylon Expd.) (BMNH); 1♂, 1♀, Koch coll, no other data (BMNH); 2♂♂, 2♀♀, no other data (MNHN, Paris). **Thailand**: Bangkok, 1♂, (H. Hillman) (BMNH).

*Asemonea cristata* Thorell

(Fig. 19A-E)

*Asemonea cristata* Thorell, 1895 : 316, ♂. Holotype ♂, Burma (BMNH) [examined]. Simon, 1901 : 396.  
 Sherriffs 1931 : 537, 538. Bonnet, 1955 : 763.  
*Asamonea cristata*: Roewer, 1954 : 927.

DIAGNOSIS. *A. cristata* is evidently not closely related to other known species of *Asemonea*, but may be readily separated by the peg-like spines on the palpal tibiae (Fig. 19B, C).

FEMALE. Unknown. Thorell (1895) considered that *A. picta*, described from two females, may belong with this species. This may be correct, but in both specimens of *A. picta* the

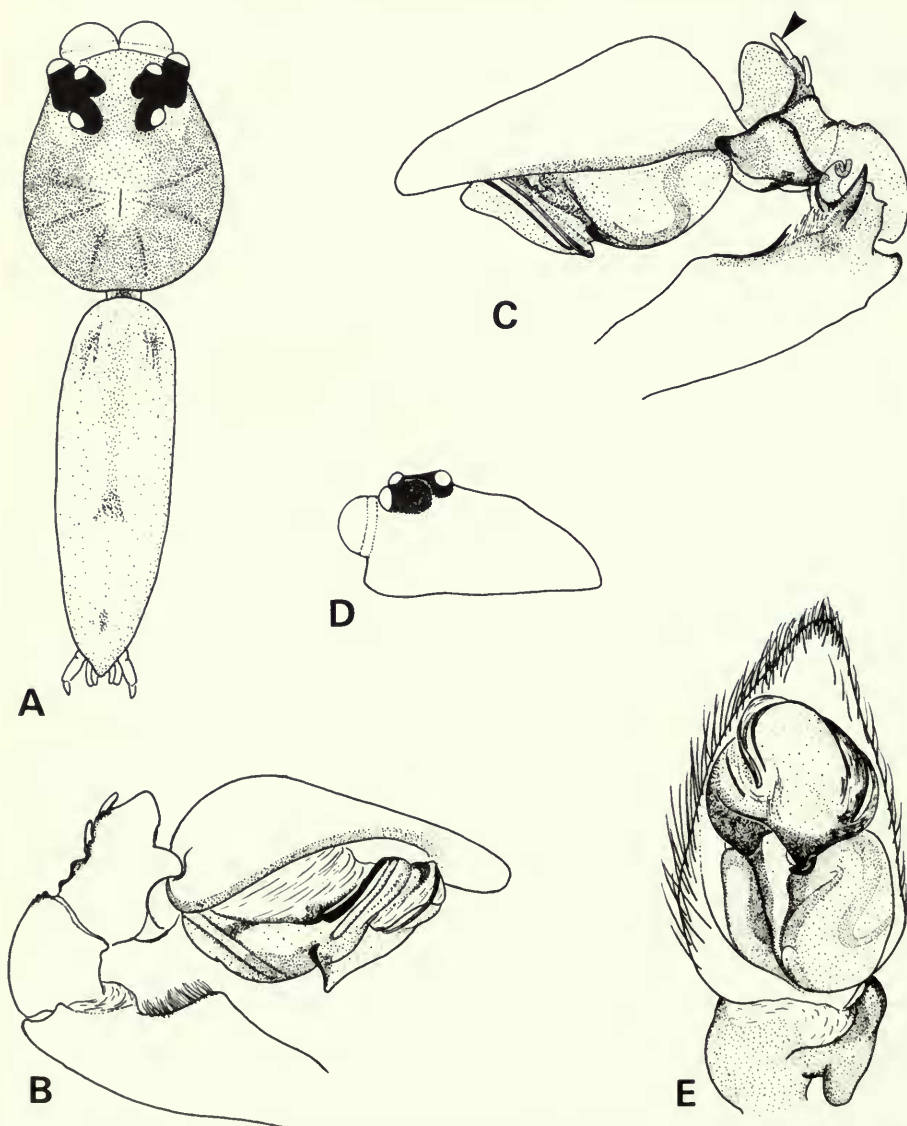


Fig. 19 *Asemonea cristata* Thorell, holotype ♂: A, dorsal view; B, palp, ental view; C, palp, ectal view; D, carapace, lateral view; E, palp, ventral view.

carapace differs in shape from that of *A. cristata*. Although this could be an artifact of preservation it also suggests a degree of sexual dimorphism not previously encountered in *Asemonea*. For the present therefore I propose to regard them as distinct taxa.

**MALE HOLOTYPE.** *Carapace* (Fig. 19A, D): pale amber grading to whitish yellow in eye and foveal regions. *Eyes*: with black surrounds except AM; sparsely fringed in whitish hairs (?rubbed). *Clypeus*: whitish yellow, (?rubbed). *Chelicerae*: pale yellow; teeth not examined. *Maxillae, labium, sternum and coxae*: pale yellow to whitish yellow, shiny. *Abdomen*: yellow-brown with faint blackish markings; spinnerets yellow-brown faintly tinged black, posteriors elongate with long terminal article. *Legs*: legs I pale yellow with faint black lateral stripes; legs II similar, but stripes lacking on prolateral surface; legs III–IV pale yellow with light brown-black stripes on tibiae and femora; spines strong and numerous, rather pale. Spination of legs I: metatarsi V 4–2–0, P 0–0–1, D 0–1–0, R 1–0–1; tibiae V 4–2–0, P 0–1–2, D 1–1–0, R 0–0–2; femora P 0–0–1, D 1–1–1, R 0–0–1. *Palp* (Fig. 19B, C, E): tegular flange present.

*Dimensions* (mm): total length 4.4; carapace length 1.76, breadth 1.44, height 0.92; abdomen length 2.6; eyes, AM row 0.84, AL row 1.05, PM row 0.66, PL row 0.71; quadrangle length 0.56. *Ratios*: AM : AL : PM : PL : 10 : 5 : 3.5 : 4; AM : CL : 10 : 6.

**DISTRIBUTION.** Burma.

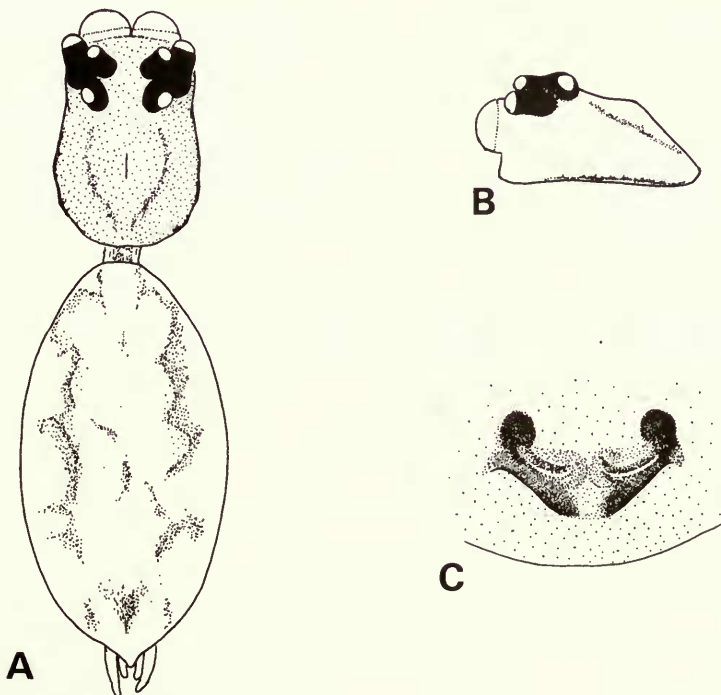
**MATERIAL EXAMINED.** **Burma:** Tharrawaddy, holotype ♂ (*E. W. Oates*) (BMNH. 1895. 9.21.957)

*Asemonea picta* Thorell

(Fig. 20A–C)

*Asemonea picta* Thorell, 1895 : 318, 2♀♀. **LECTOTYPE** ♀, (here designated) Burma (BMNH); **PARALECTOTYPE** ♀, Burma (NR. Stockholm) [examined]. Simon, 1901 : 396. Sherriffs, 1931 : 538; Bonnet, 1955 : 764.

*Asamonea picta*: Roewer, 1954 : 927.



**Fig. 20** *Asemonea picta* Thorell, lectotype ♀: A, dorsal view; B, carapace, lateral view; C, epigyne.



DIAGNOSIS. *A. picta* does not appear to be very closely related to other known species of *Asemonea*, from which it can be distinguished by the structure of the epigyne (Fig. 20B).

MALE. Unknown, but possibly conspecific with *A. cristata*.

FEMALE LECTOTYPE. *Carapace* (Fig. 20A, B): pale greyish yellow grading to whitish yellow in eye region with indistinct blackish border line and brownish bands from PL's to near posterior thoracic margin. *Eyes*: with black surrounds except AM; fringed in whitish hairs. *Clypeus*: clothed in fine shining white hairs. *Chelicerae*: pale yellow, shiny; teeth not examined. *Maxillae, labium, sternum and coxae*: whitish yellow. *Abdomen*: whitish yellow with faint greenish brown markings; spinnerets whitish yellow, posteriors elongate with long terminal article. *Legs*: whitish yellow with brownish green spots on either end of tibiae (possibly all that remains of lateral stripes); spines strong and numerous, rather pale. Spination of legs I: metatarsi V 4-2-0, P 0-0-1, R 0-0-1; tibiae V 4-3-2, P 0-1-1, R 0-0-1; femora P 0-0-1, D 1-1-1. *Epigyne* (Fig. 20C): dark red-brown.

*Dimensions* (mm): total length 4.44; carapace length 1.52, breadth 1.08, height 0.74; abdomen length 2.8; eyes, AM row 0.75, AL row 0.98, PM row 0.61, PL row 0.67; quadrangle length 0.50. *Ratios*: AM : AL : PM : PL : 9.5 : 5 : 3 : 4; AM : CL : 9.5 : 5.

VARIATION. ♀ paralectotype 4.7 mm total length, 1.68 mm carapace length. Although some shrinkage has occurred the shape of the carapace is more or less as in the lectotype.

DISTRIBUTION. Burma.

MATERIAL EXAMINED. **Burma**, Tharrawaddy, Lectotype ♀, (E. W. Oates) (BMNH. 1985.9.21.958); paralectotype ♀, same data as lectotype except (NR, Stockholm).

### *Asemonea pinangensis* sp. n.

(Fig. 21A-E)

DIAGNOSIS. *A. pinangensis* is closely related to *A. minuta*, but may be distinguished by the colour markings (Fig. 21A, B), the shape of the palpal femoral apophysis, the lip on the dorsal tibial apophysis (Fig. 21D) and distribution.

FEMALE. Unknown.

MALE HOLOTYPE. *Carapace* (Fig. 21A, B): whitish yellow with heavy black markings; iridescent green under some angles of illumination. *Eyes*: entire region black; sparsely fringed in pale yellowish hairs. *Clypeus*: black with pale yellow band from margin to lower space between AM. *Chelicerae*: whitish yellow with light bluish grey markings, shiny; teeth not examined. *Maxillae, labium, sternum and coxae*: whitish yellow, shiny. *Abdomen*: black with whitish yellow patches; clothed, especially posteriorly, in long grey-black hairs; spinnerets black with grey-black hairs, more or less subequal in length. *Legs*: legs I whitish yellow with black lateral streaks on metatarsi, tibiae, patellae and femora; legs II-III whitish yellow; legs IV whitish yellow with black annuli on femora and both ends of tibiae; spines moderately strong and numerous, pale. Spination of legs I: metatarsi V 4-0-0, P 0-1-1, R 0-1-1; tibiae V 4-2-0, P 0-0-1, R 0-0-1; femora P 0-0-2, D 1-1-1. *Palp* (Fig. 21C, D, E): pale yellowish with heavy black markings.

*Dimensions* (mm): total length 2.36; carapace, length 1.16, breadth 0.92, height 0.6; abdomen length 1.2; eyes, AM row 0.56, AL row 0.72, PM row 0.46, PL row 0.52; quadrangle length 0.44. *Ratios*: AM : AL : PM : PL : 7 : 3.5 : 2.5 : 3; AM : CL : 7 : 4.

DISTRIBUTION. Malaysia, Pinang Island.

MATERIAL EXAMINED. **Malaysia**: Pinang Island; environs of Telok Bahang, roadside vegetation, net sweeping, holotype ♂, 16.viii. 1979 (J. & F. Murphy, 8283) (BMNH. 1979.9.20.2).



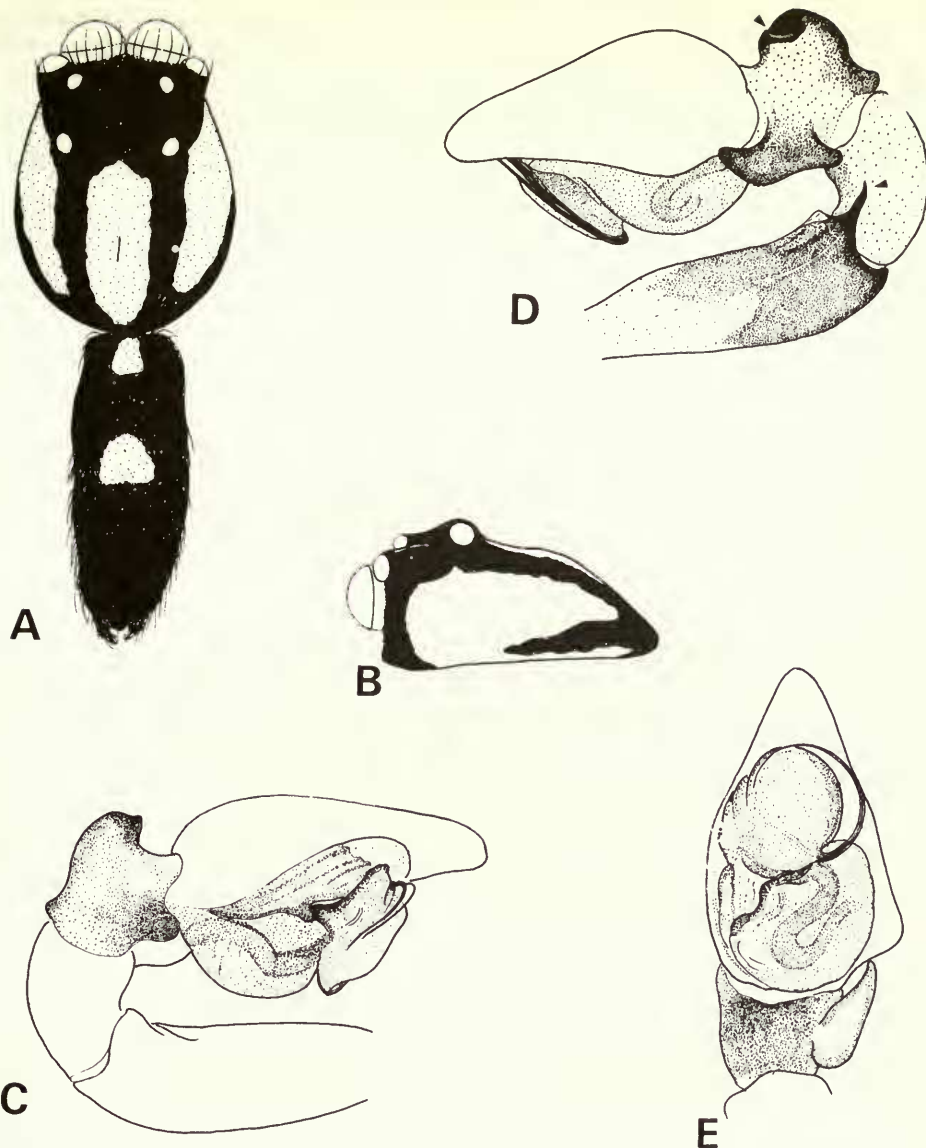


Fig. 21 *Asemonea pinangensis* sp. n., holotype ♂: A, dorsal view; B, carapace, lateral view; C, palp, ental view; D, palp, ectal view; E, palp, ventral view.

### Genus *GOLEBA* gen. n.

**DEFINITION.** Spiders medium in size ranging from about 4.8 to 7.0 mm in length. Sexes alike in general habitus, sexual dimorphism sometimes evident in colour markings; not hirsute. *Carapace*: longer than broad, moderately high with elevated eye region, widest at posterior margin of coxae II; fovea long moderately sulciform, situated more or less midway between posterior lateral eyes and posterior thoracic margin; sculpturing not marked, cuticle sometimes weakly iridescent green. *Eyes*: with black surrounds except anterior medians; set on moderately well developed tubercles; arranged in four transverse rows (rows two and three very close) comprised of anterior medians, anterior laterals, posterior medians and posterior laterals; anterior medians largest, almost occupying full breadth of facies; anterior laterals less than half diameter of anterior medians, positioned behind and plainly wider than first

row; posterior medians relatively large, very close to and clearly inside optical axis of anterior laterals; posterior laterals as large or almost as large as anterior laterals, set closer together and well inside lateral margins of carapace; quadrangle formed by posterior median and posterior lateral eyes broader than long; entire quadrangle (measured from base of anterior medians to posterior margin of posterior lateral eyes) occupying between 25 and 30% of carapace length. *Clypeus*: between 50 and 60% of diameter of anterior median eyes; sometimes clothed in fine shining hairs layered perpendicularly, with three curved setae in lower space between anterior median eyes. *Chelicerae*: of medium size, moderately robust, vertical or inclined posteriorly; promargin with three teeth, retromargin with five to seven. *Maxillae*: of medium length, outer margins slightly excavated; convergent. *Labium*: subtriangular, wider than long, about half maxillae length. *Sternum*: cordiform; margins indistinct. *Coxae*: subequal in size. *Abdomen*: elongate; spinnerets unequal in size, posteriors longest, sometimes with long terminal article; anal tubercle a moderately well developed cone; tracheal system not examined. *Legs*: long and slender, spines numerous, long and robust. *Female palps*: long and slender with apical claw. *Secondary genitalia*: complex and inter-specifically distinct; defined under definition of species groups.

TYPE SPECIES: *Asemonea puella* Simon.

DIAGNOSIS. *Goleba* seems on the basis of carapace shape and eye dispositions to be most closely related to *Asemonea*, but may be readily distinguished by the presence of a ventral tubercle on the palpal femora in males (Fig. 22D, 24B) and by the structure of the epigynes in females.

ETYMOLOGY. The generic name is an arbitrary combination of letters.

#### List of species in the genus *Goleba* gen. n.

*Goleba pallens* (Blackwall, 1877)

*G. puella* (Simon, 1885)

*G. punctata* (Peckham, Peckham & Wheeler, 1888)

REMARKS. Although *Goleba* is only known from three species it may on account of wide differences in genitalic characters be usefully divided into two species groups. The *puella*-group, represented by one species from West and Central Africa and the *pallens*-group with two species from the Malagasy subregion. An identification key is not provided as the species can be readily separated from one another by the genitalia.

#### The *puella*-group

DEFINITION. The only species known to belong here is characterized by the following secondary genitalic characters. *Male palps* (Fig. 22C, D, E): femora with ventral tubercle; patellae lacking apophyses; tibiae with retrolateral and ventral apophyses; cymbium distally finger-like, fringed in long setae; embolus (e) arising from basal margin of tegulum, proximally stout (possibly as a result of fusion between the embolic guide and embolus) distally long and thread-like; tegulum (t) elongate, irregular in outline with sinuous ducts, on apical dorsal surface a flange (f) which may, in the resting palp, protect the embolic tip; subtegulum (st) bulbus with sinuous ducts, an anterior lobe (l) and apophysis (m). The lobe-like structure (x) arises from the basal haematodocha and seems to form part of the locking mechanism which keeps the tegulum and subtegulum in position. *Epigyne*: with anteriorly situated atrium and median posterior scape; introductory ducts indistinct; spermathecae large evidently lobed and associated with well developed gland-like tubules.

*Goleba puella* (Simon) comb. n.

(Figs 22A–E; 23A–C; 29)

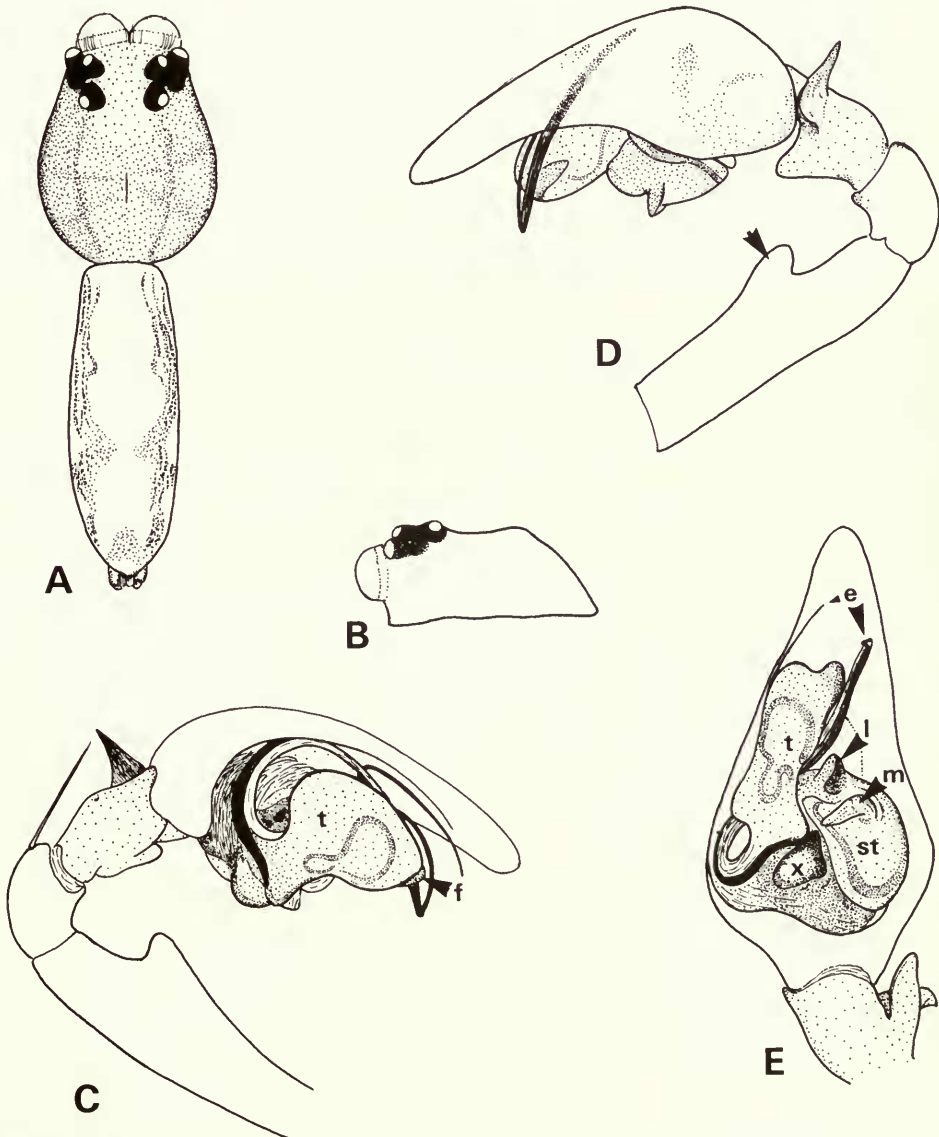
*Asamonea puella* Simon, 1885 : 27, ♂, ♀. LECTOTYPE ♂, 3♀♀ PARALECTOTYPES (here designated)

Angola (MNHN, Paris) [examined]. Peckham & Peckham & Wheeler, 1888 : 242. Peckham & Peckham, 1889 : 31. Roewer, 1954 : 927; 1965 : 4.

*Asemonea puella*: Bonnet, 1955 : 764. Clark, 1974 : 12.

**DIAGNOSIS.** *G. puella* is evidently not closely related to other known species in the genus, but may be distinguished by the absence of a conductor in males and presence of an epigynal scape in females (Figs 22C–E; 23A–C).

**MALE** from Angola. *Carapace* (Fig. 22A, D): pale amber, yellowish in eye region with indistinct sooty bands marginally and extending from PL's to posterior thoracic margin; weakly iridescent under some angles of illumination. *Eyes*: with black surrounds except AM; fringed in shining whitish hairs. *Clypeus*: clothed in fine shining hairs. *Chelicerae*: pale yellow with sooty transverse basal bands, shiny; promargin with 3 teeth, retromargin with 5.



**Fig. 22** *Goleba puella* (Simon), ♂ from Angola: A, dorsal view; B, carapace, lateral view; C, palp, ental view; D, palp, ectal view; E, palp, ventral view.

*Maxillae and labium*: pale yellow. *Sternum*: whitish yellow. *Coxae*: pale yellow. *Abdomen*: whitish yellow with blackish markings; spinnerets whitish yellow, posteriors lightly tinged black and only slightly longer than anteriors and medians. *Legs*: pale yellow grading to amber distally with vague black lateral stripes on legs I and indistinct sooty annuli on femora III–IV; spines strong and numerous. Spination of legs I: metatarsi V 2–4–0, P 1–0–1, R 1–0–1, D 0–1–0; tibiae V 2–2–2, P 1–0–1, D 1–1–0, R 0–1–1; patellae P 0–1–0, R 0–1–0; femora P 0–0–2, D 1–1–2, R 1–1–0. *Palps* (Fig. 22B, C, E): apophysis (m) although elongate is considered to be homologous with the apophysis found in *G. pallens* and *Pandisus*.

*Dimensions* (mm): total length 5.2; carapace length 2.16, breadth 1.76, height 0.96; abdomen length 3.0; eyes, AM row 1.02, AL row 1.22, PM row 0.84, PL row 0.87; quad-range length 0.64. *Ratios*: AM : AL : PM : PL : 12.5 : 5 : 3.5 : 4; AM : CL : 12.5 : 7.

**FEMALE** from Ghana. Similar to ♂ except for the following: *Carapace*: lacking marginal and thoracic markings. *Chelicerae*: without black basal bands: promargin with 3 teeth, retro-margin with 7. *Abdomen*: whitish yellow. *Legs*: pale yellow. Spination of legs I: metatarsi V 2–4–0, P 1–0–1, R 1–0–1; tibiae V 2–2–2, P 0–1–1, R 0–1–1; femora P 0–0–2, D 1–1–2, R 0–1–0. *Epigyne* (Fig. 23A–C): openings indistinct; gland-like tubules well developed and visible through the integument.

*Dimensions* (mm): total length 4.88; carapace length 2.04, breadth 1.56, height 0.92; abdomen length 3.16; eyes, AM row 0.96, AL row 1.14, PM row 0.76, PL row 0.8; quad-range length 0.60. *Ratios*: AM : AL : PM : PL : 12 : 4.6 : 3 : 4; AM : CL : 12 : 6.

**VARIATION**. ♂ total length 5.0 to 5.2 mm, carapace length 2.08–2.16 mm (3 specimens); ♀ total length 4.8–6.04 mm, carapace length 2.04–2.28 mm (5 specimens).

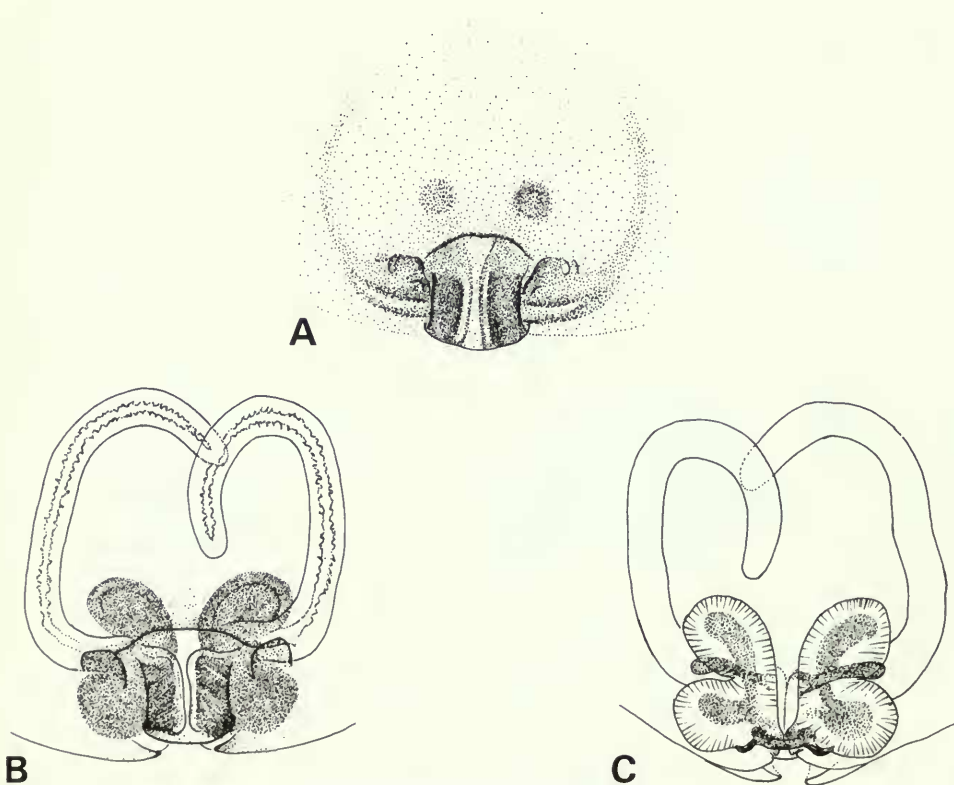


Fig. 23 *Goleba puella* (Simon), ♀ from Ghana: A, epigyne; B, vulva, ventral view; C, vulva, dorsal view.



DISTRIBUTION. Angola; Ghana; Kenya; Zaire.

MATERIAL EXAMINED. **Angola:** Cabinda, Landana, lectotype ♂, 3♀♀ paralectotypes, (*Petit*) (MNHN, Paris, 6812); N'Dalla Tondo, 1♂, 1♀, 26.xi.1908 (*Ansorge*) (BMNH); Dundo, 1♂, 1969 (*A. de Barros Machado*, Ang. 22430). **Ghana:** Accra, Achimota, in garden, 1♀, v.1961 (*C.P. Hinckley*) (MCZ, Harvard); Takoradi, 1♀, 6.i.1960 (*M.B. Usher*) (BMNH). **Kenya:** Kilifi, taken from living green leaves growing low down on trunk of a sausage tree *Kigelia africana*, 1♀, 11.viii.1974 (*J. & F. Murphy*, 4339). **Zaire:** Abimva, 1♀, vi.1925 (*H. Schouteden*, MT. 31276) (MRAC, Tervuren).

### The *pallens*-group

DEFINITION. This group is comprised of two species, *G. pallens* from the Seychelles and Aldabra and *G. punctata* from Madagascar. The secondary genitalia are distinctive and confusion with the *puella*-group is unlikely. Unfortunately only the male of *G. pallens* is known.

*Male palps:* femora and patellae more or less as in the *puella*-group; tibiae with retrolateral and dorsal apophyses; cymbium distally finger-like, fringed in long setae; embolus (e) originating below tegulum (i.e. in ventral view), long and thread-like, retained in heavily sclerotized conductor (c) which terminates distally in a spur (s); tegulum (t) irregular in outline; subtegulum (st) bulbus with anterior lobe (al), sinuous ducts and scale-like apophysis (m) (probably homologous with that found in *G. puella* and *Pandisus*). *Epigynes:* opening indistinct; scape lacking; ducts wide and convoluted; spermathecae relatively large; gland-like tubules apparently absent.

### *Goleba pallens* (Blackwall) comb. n.

(Fig. 24A–H)

*Lyssomanes pallens* Blackwall, 1877; subadult ♂. Holotype subadult ♂, Seychelles (UM, Oxford) [examined]. Peckham, Peckham & Wheeler, 1888 : 246.

*Asemonea pallens*: Simon, 1901 : 396. Hirst, 1911 : 382. Bonnet, 1955 : 763. Wanless (in press a).

*Asamonea pallens*: Roewer, 1954 : 927.

DIAGNOSIS. *G. pallens* is most closely related to *G. punctata* from which it may be separated by the posterior epigynal openings (Fig. 24F).

MALE (formerly undescribed) from Aldabra. *Carapace* (Fig. 24A, C): pale amber grading to whitish yellow in eye region, shiny. *Eyes:* with black surrounds except AM; fringed in shining silky white hairs. *Clypeus:* with transverse band of light orange hairs. *Chelicerae:* pale yellow, shiny; teeth not examined. *Maxillae and labium:* pale yellow. *Sternum:* whitish yellow. *Coxae:* pale yellow. *Abdomen:* whitish yellow with poorly defined longitudinal reddish brown bands; spinnerets pale yellow: posteriors with long terminal article. *Legs:* light yellow grading to pale amber distally with obscure dark amber stripes on retrolateral surface of tibiae I–II; spines strong and numerous. Spination of legs I: metatarsi V 2–2–0, P 1–0–1, R 0–0–1, D 0–1–0; tibiae V 2–2–2, P 0–1–1, R 0–1–1, D 1–1–0; patellae P 0–1–0, R 0–1–0; femora P 0–1–1, D 1–1–1, R 1–1–1. *Palp* (Fig. 24B, D, E): embolus long and slender, retained for much of its length in the heavily sclerotized conductor.

*Dimensions* (mm): total length 4.4; carapace length 1.8, breadth 1.48, height 0.8; abdomen length 2.56; eyes, AM row 0.86, AL row 0.96, PM row 0.64, PL row 0.68; quadrangle length 0.51. *Ratios:* AM : AL : PM : PL : 10.5 : 3.8 : 2.5 : 3.5 : AM : CL : 10.5 : 6.

FEMALE from Aldabra. Similar to ♂ except for the following: *Clypeus:* clothed in shining silky white hairs. *Abdomen:* dorsal markings evidently lacking. *Legs:* pale yellow. Spination of legs I: metatarsi V 4–0–0, P 1–1–1, R 1–1–1; tibiae V 4–2–0, P 1–1–0, R 0–1–1; patellae R 0–1–0; femora P 0–0–2, D 1–1–1, R 0–0–1. *Epigyne* (Fig. 24F–H): ducts broad and convoluted.

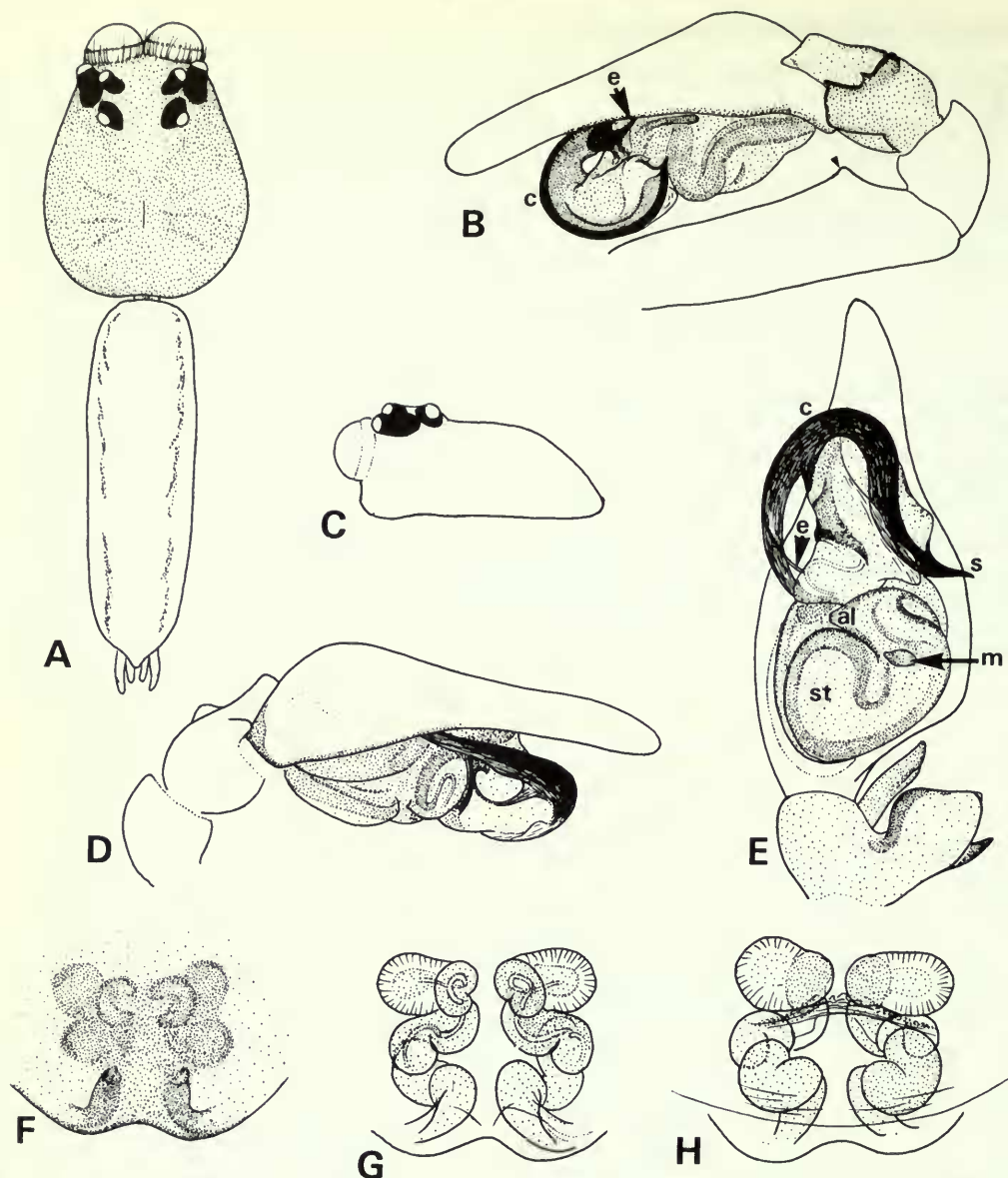


Fig. 24 *Goleba pallens* (Blackwall), ♂ from Aldabra: A, dorsal view; B, palp, ectal view; C, carapace, lateral view; D, palp, ental view; E, palp, ventral view. ♀ from Aldabra: F, epigyne; G, vulva, dorsal view; H, vulva, ventral view.

*Dimensions* (mm): total length 4.76; carapace length 1.92, breadth 1.4, height 0.84; abdomen length 2.72; eyes, AM row 0.88, AL row 0.96, PM row 0.64, PL row 0.68; quad-angle length 0.51. *Ratios*: AM : AL : PM : PL : 11 : 4 : 2.6 : 3.6; AM : CL : 11 : 6.

*VARIATION*. ♀ total length 4.5 to 5.3 mm, carapace length 1.92–2.24 mm (3 specimens).

*DISTRIBUTION*. Aldabra Atoll; Seychelles.

*MATERIAL EXAMINED*. **Aldabra Atoll**: South Island, Takamaka Grove, 1♂, 1♀, 1–17.ii.1968 (*B. Cogan & A. Hutson*, Royal Society Exp., 1967–8) (BMNH) **Seychelles**: holotype subadult ♂, (*E. Perceval Wright*) (UM, Oxford); Denis Island, 1♀, (*J.S. Gardener*) (BMNH); Silhouette Island, 1♀, (Percy Sladen Trust Exp., 1905) (BMNH).

***Goleba punctata* (Peckham, Peckham & Wheeler) comb. n.**

(Fig. 25A–F)

*Asamonea punctata* Peckham, Peckham & Wheeler, 1888 : 244, ♀ and immature ♂. LECTOTYPE ♀ (here designated) Madagascar (MCZ, Harvard) [examined]. Roewer, 1954 : 927; 1965 : 4.  
*Asemonea punctata*: Simon, 1901 : 396. Bonnet, 1955 : 764.

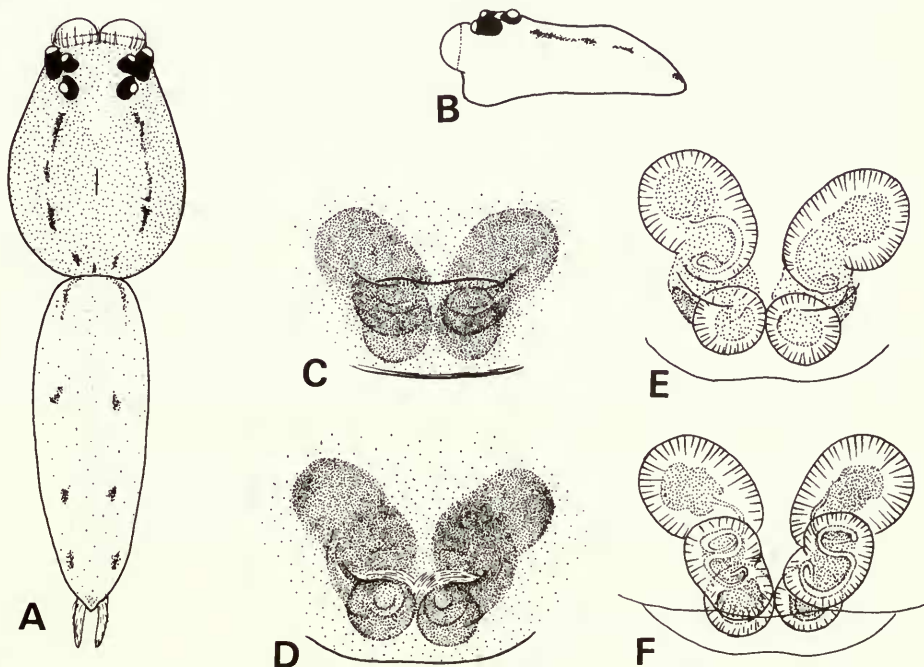
**DIAGNOSIS.** *G. punctata* is most closely related to *G. pallens*, but may be distinguished by the median epigynal openings (Fig. 25C).

**MALE.** Unknown.

**FEMALE** from Mahasoa. *Carapace* (Fig. 25A, B): pale yellow-brown with broken dark reddish brown bands from PL's to posterior thoracic margin. *Eyes*: with black surrounds except AM; fringed in silky white hairs. *Clypeus*: clothed in fine shining white hairs. *Chelicerae*: yellow-brown; promargin with 3 teeth, retromargin with 7. *Maxillae, labium, sternum and coxae*: pale yellow. *Abdomen*: whitish yellow with purple-black stripes anteriorly and spots posteriorly; clothed in very fine light yellowish hairs; spinnerets whitish yellow; posteriors with long terminal article. *Legs*: pale yellow; spines strong and numerous, rather pale. Spination of legs I: metatarsi V 4–2–0, P 0–0–1, R 0–0–1; tibiae V 2–2–2, P 1–0–1, R 1–0–1; patellae P 0–1–0, R 0–1–0; femora P 0–1–1, D 1–1–1, R 1–1–1. *Epigyne* (Fig. 25C–F): varies with view point.

*Dimensions* (mm): total length 6·9; carapace length 2·88, breadth 2·28 height 1·12; abdomen length 4·0; eyes, AM row 1·46, AL row 1·36, PM row 0·95, PL row 1·0; quadrangle length 0·72. *Ratios*: AM : AL : PM : PL : 15 : 5 : 4 : 5; AM : CL : 15 : 9.

**VARIATION.** ♀ total length 6·6 to 6·9 mm, carapace length 2·64–2·88 mm (4 specimens). The carapace markings are sometimes lost in preserved specimens. The epigyne is somewhat translucent and its appearance alters with view point. In one specimen the openings were plugged.



**Fig. 25** *Goleba punctata* (Peckham, Peckham & Wheeler), ♀ from Mahasoa: A, dorsal view; B, carapace, lateral view; C, epigyne, ventral view; D, epigyne, viewed slightly from behind; E, vulva, ventral view; F, vulva, dorsal view.



DISTRIBUTION. Madagascar.

MATERIAL EXAMINED. **Madagascar**: lectotype ♀, (MCZ, Harvard); Massif Andringitra, Mahaso, 2100 m, 1♀, x.1971 (*B. Ranson*, MT. 142.844); Beanana, 1♀, ii.1970 (*A. Lambillon*, MT. 142.671) (MRAC, Tervuren); Antongil, 1♀, (*A. Mocqueries*) (MNHN, Paris, 20202).

## Species inquirenda

### *Lyssomanes sikkimensis* Tikader

*Lyssomanes sikkimensis* Tikader, 1967: 120, ♀. Holotype ♀, Ligship, West Sikkim, India. Tikader, 1977: 206.

I have not examined the type of this species, but to judge from the original description (Tikader, 1967) it cannot be placed in any *Lyssomaninae* genera. The single tooth on the inner cheliceral margin indicates that it belongs somewhere in the *unidentati* (Simon, 1901).

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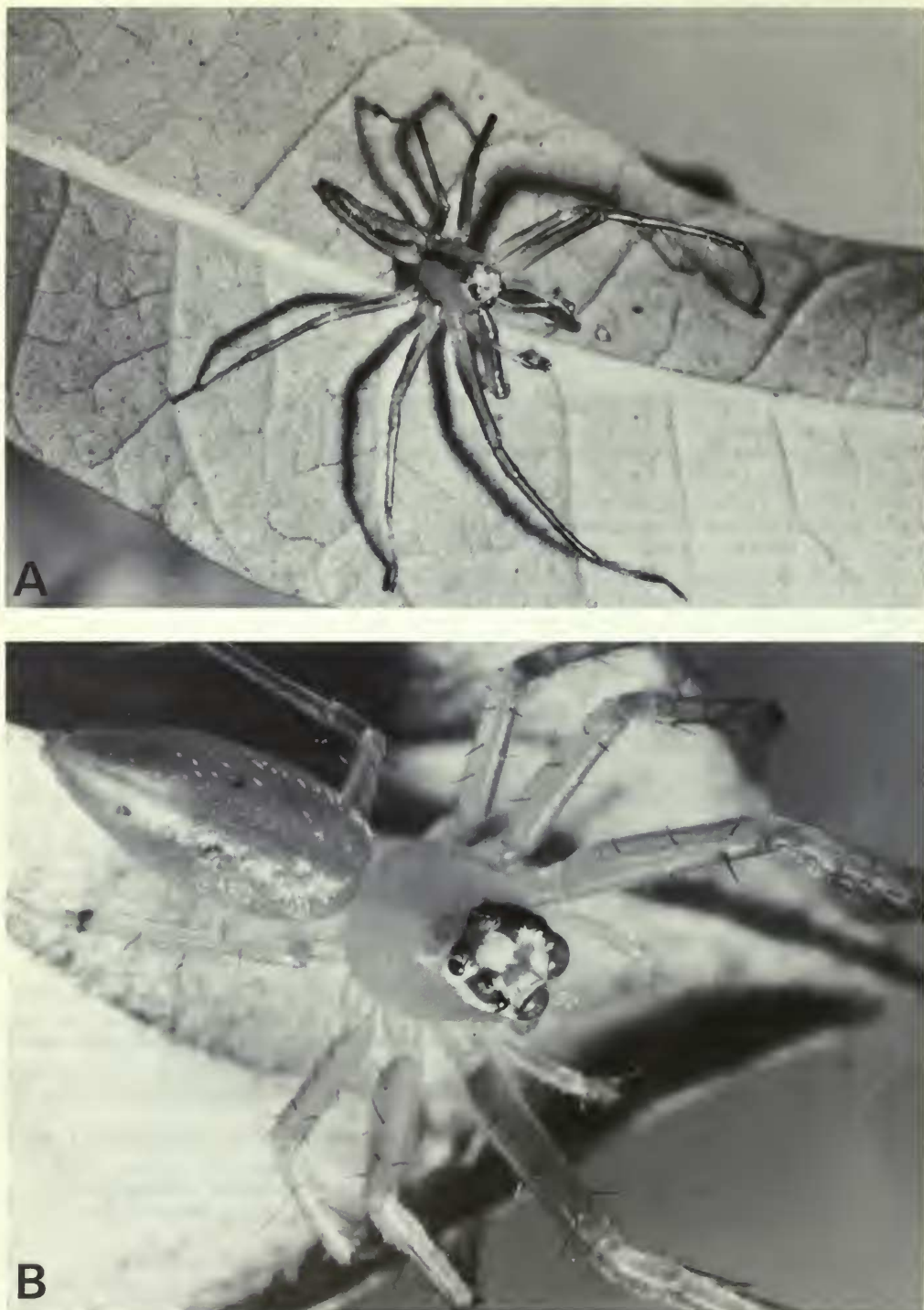


Fig. 26 *Lyssomanes viridis* (Walckenaer): A, ♂; B, ♀.



Fig. 27 *Asemonea murphyi* sp. n.: A, ♀; B, ♂.



Fig. 28 *Asemonea stella* sp. n., ♂♂.





Fig. 29 *Goleba puella* (Simon), ♂♂.